



glass blocks



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POSTON BRICK & CONCRETE PRODUCTS COMPANY
SPRINGFIELD, ILLINOIS.

THE MARK OF A MODERN BUILDING

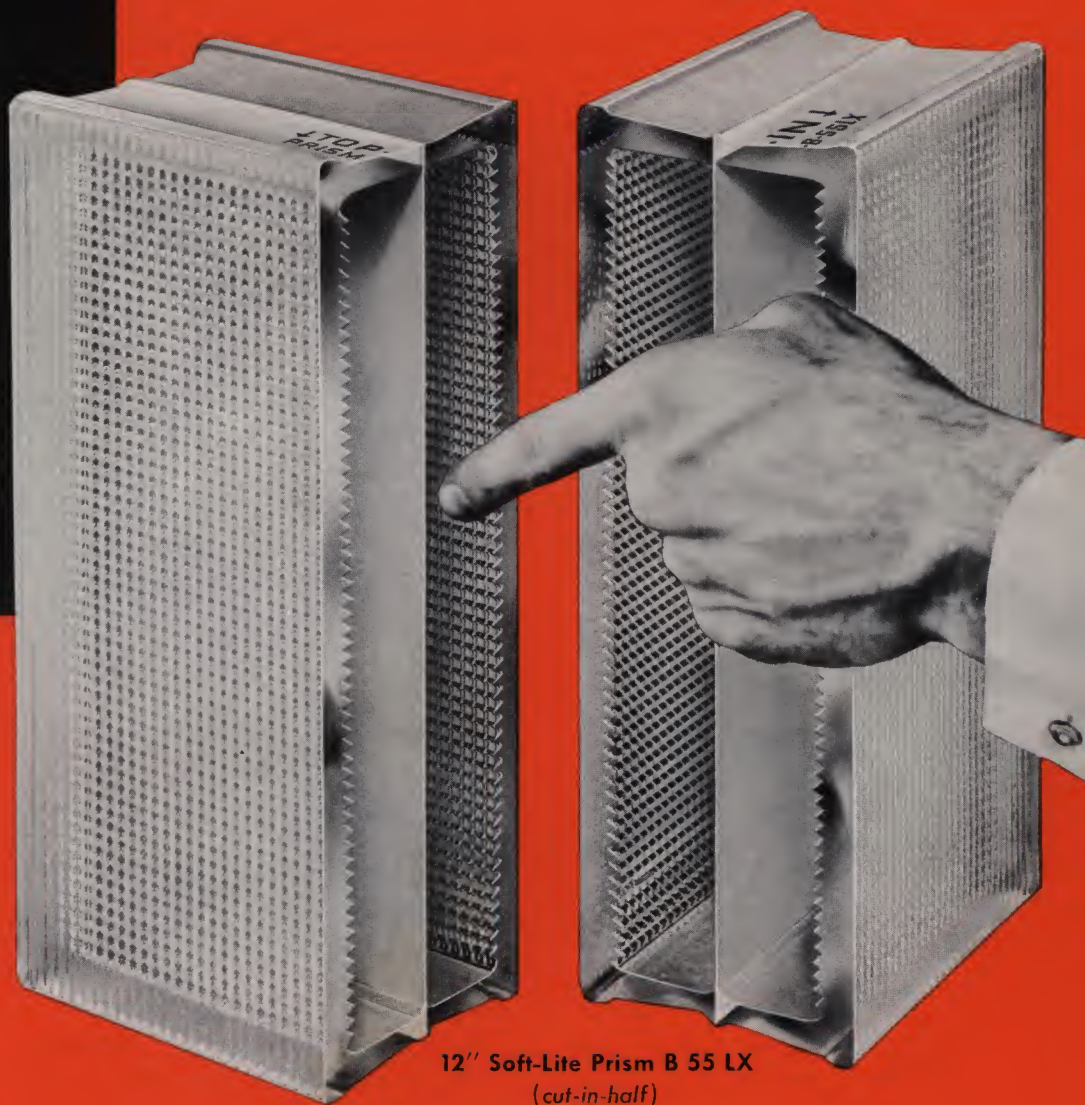
PC Glass Blocks have

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INSULATING VALUES OF MASONRY

LIGHT- TRANSMITTING VALUES OF GLASS



PC GLASS BLOCKS are hollow "all glass" units with fused seals made at high temperatures, relatively free of entrapped water vapor. Because of this "all glass" construction the tight seal has the same coefficient of expansion as the block itself . . . the joint is as strong as any other part of the block. The tight seal insures a dry, dead-air space within the block—this dead-air space is an effective heat retardant. The insulating value of single cavity PC Glass Blocks is better than the value of an 8-inch brick wall—more than twice that of ordinary windows. The double cavity blocks—with a fibrous glass screen insert as shown above—provide even better thermal insulation value.

PC Glass Blocks are made of clear, colorless glass of proven durability. The light which streams through them is of full daylight tone, requiring no special consideration in the matching of colors, either for decoration or production uniformity.

PC Glass Blocks have a special resilient plastic coating on all mortar edges. This forms a permanent bond between glass and mortar, which insures a high degree of wind resistance and weather tightness. The glass block edge construction forms a "key-lock" mortar joint, providing a full bed of mortar, yet permitting a visible joint of only about $\frac{1}{4}$ inch, resulting in a trim panel that is pleasing to the eye. The "key-lock" is easy to handle in laying. *Any mason can install PC Glass Blocks.*

PC Glass Blocks are made in various patterns and in three sizes— $5\frac{3}{4}" \times 5\frac{3}{4}"$, $7\frac{3}{4}" \times 7\frac{3}{4}"$ and $11\frac{3}{4}" \times 11\frac{3}{4}"$ (generally referred to as 6", 8" and 12"). All are $3\frac{7}{8}"$ thick. Special shapes are available for turning corners and for building curved panels. Complete information, pages 28, 29, 30 and 37.

PC Glass Blocks do so many things so well



1. Flood working areas with natural daylight.
2. Reduce heat losses.
3. Aid temperature and humidity control.
4. Reduce condensation on light-transmitting areas.
5. Provide effective sound insulation.
6. Prevent infiltration of harmful dust and grit.
7. Clean easily and thoroughly.
8. Create a neat, modern appearance.
9. Afford greater privacy.
10. Afford protection against intruders.
11. Increase usable floor area.
12. Cut maintenance costs.

PC GLASS BLOCKS

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The uses of PC Glass Blocks are practically limitless. In any type of building there is some place that can be improved by the installation of PC Glass Blocks. They are adaptable to all styles of architecture. PC Glass Blocks are truly the mark of a modern building.

ADMIT ABUNDANT DAYLIGHT... Panels of PC Glass Blocks help get the most natural daylight into a building while retaining privacy. This light is dispersed, diffused or directed—in all cases with more pleasant results than from light obtained through ordinary windows. Buildings with PC Glass Block panels are well-lighted and cheerful. Improved daylighting provides eye comfort, greater safety . . . means more efficient workmanship.

HAVE GREAT INSULATING VALUE... Because PC Glass Blocks are hollow and contain inert air held in a partial vacuum, they have high insulating value. Temperature and humidity control is easier and less costly. Heat loss is less in winter—heat gain is less in summer, thus lightening the load on heating and air-conditioning equipment. PC Glass Blocks substantially reduce distracting noises, eliminate unsightly views.

MINIMIZE SURFACE CONDENSATION... Where high humidity is necessary for, or results from, manufacturing processes, condensation is a big problem. When PC Glass Block panels are installed this problem is eliminated. For moisture will not condense on the warm side of a PC Glass Block panel except under extreme temperature and humidity conditions. Troublesome, dripping moisture is avoided.

ARE EASY TO CLEAN... Because the entire panel of PC Glass Blocks can be cleaned at one time—not a small pane at a time—the cleaning operation is very simple. There are no muntins or cross sash to clean . . . just a simple sweep of one smooth glass-and-mortar area. The glass block panels can be cleaned with a damp cloth, or with hose and brush. Furthermore, rain helps keep the exterior surfaces of the panels free from dirt. Long after ordinary clear glass looks spotty or streaked, PC Glass Blocks look clear and clean.

ARE FUNCTIONAL AND DECORATIVE... There are patterns of PC Glass Blocks that specifically direct or diffuse daylight, and other patterns that are primarily decorative. All PC Glass Blocks improve the looks—both inside and out—of any structure. A building with lots of glass blocks in it is a cheerful, clean-looking building. Well-kept, efficient-looking plants rate better in public opinion. Attractive, well-lighted stores get business that dull, dark stores lose. People like cheerful, inviting buildings—whether they work there or come to buy. PC Glass Blocks can be combined with other materials, and are adaptable to a wide variety of building uses . . . from small decorative panels to entire walls.

ASSURE GREATER PRIVACY... Panels of PC Glass Blocks offer greater privacy without shutting out natural daylight. Offices, laboratories, drafting rooms, etc., can be quiet and private, even in noisy factory surroundings. And, because PC Glass Block panels are a substantial part of the wall and have great strength, they offer greater protection from intruders and mischief-makers. Limited vision of general outdoor conditions can be had, if desired, by inserting PC Vue Blocks in the panels.

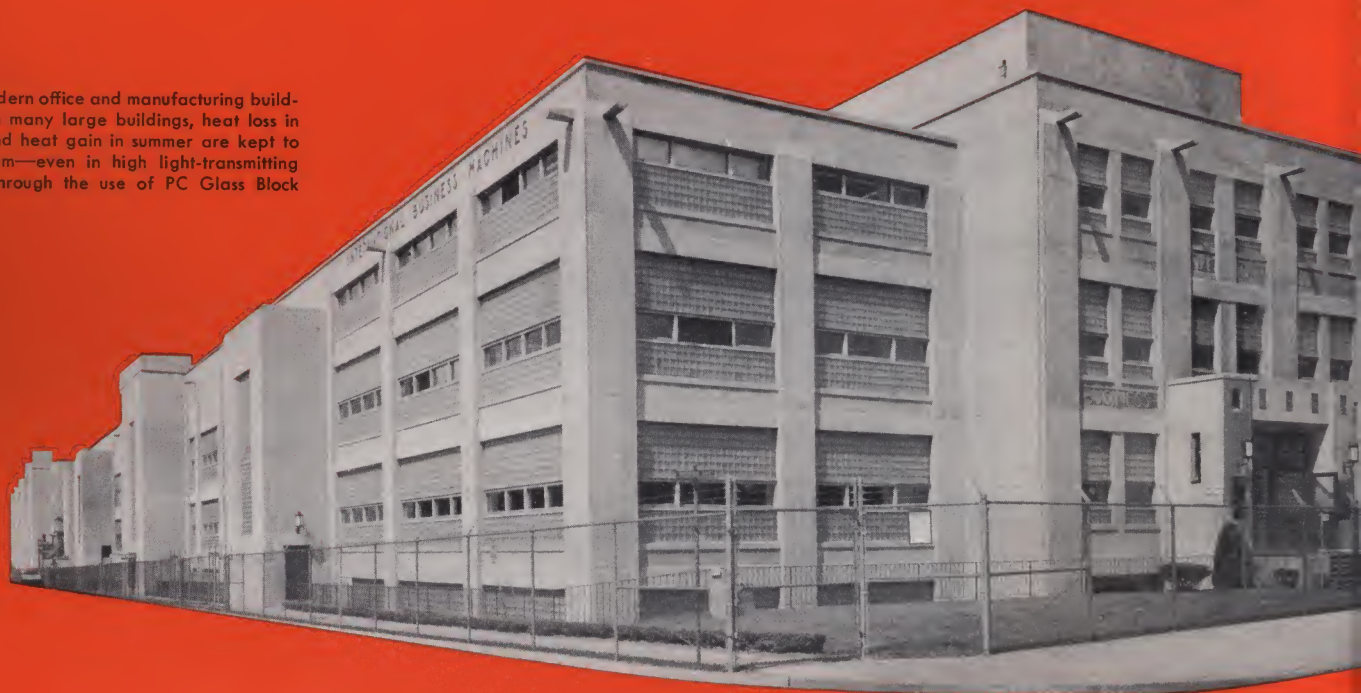
CUT MAINTENANCE COSTS... Panels of PC Glass Blocks are permanent. The blocks are not easily marred or broken, and, should replacement of an individual block be required, it can be done easily by a regular mason. Maintenance costs are almost nonexistent with PC Glass Block panels for light-giving walls or partitions. There is no unsightly and dangerous corroded or rotted sash to be replaced . . . no costly and slow painting to be done. Infiltration of dust and grit is eliminated, so cleaning expenses are reduced.

PC Glass Blocks for practical,



The high humidity prevalent in bottling plants such as that of the Dr. Pepper Company, Dallas, Texas, makes sash maintenance a recurrent expense. PC Glass Blocks eliminate this trouble, keep maintenance costs to a minimum, and because PC Glass Block panels are a material part of the wall, they discourage intruders. Architects: Thomas, Jameson & Merrill.

In this modern office and manufacturing building, as in many large buildings, heat loss in winter and heat gain in summer are kept to a minimum—even in high light-transmitting areas—through the use of PC Glass Block panels.



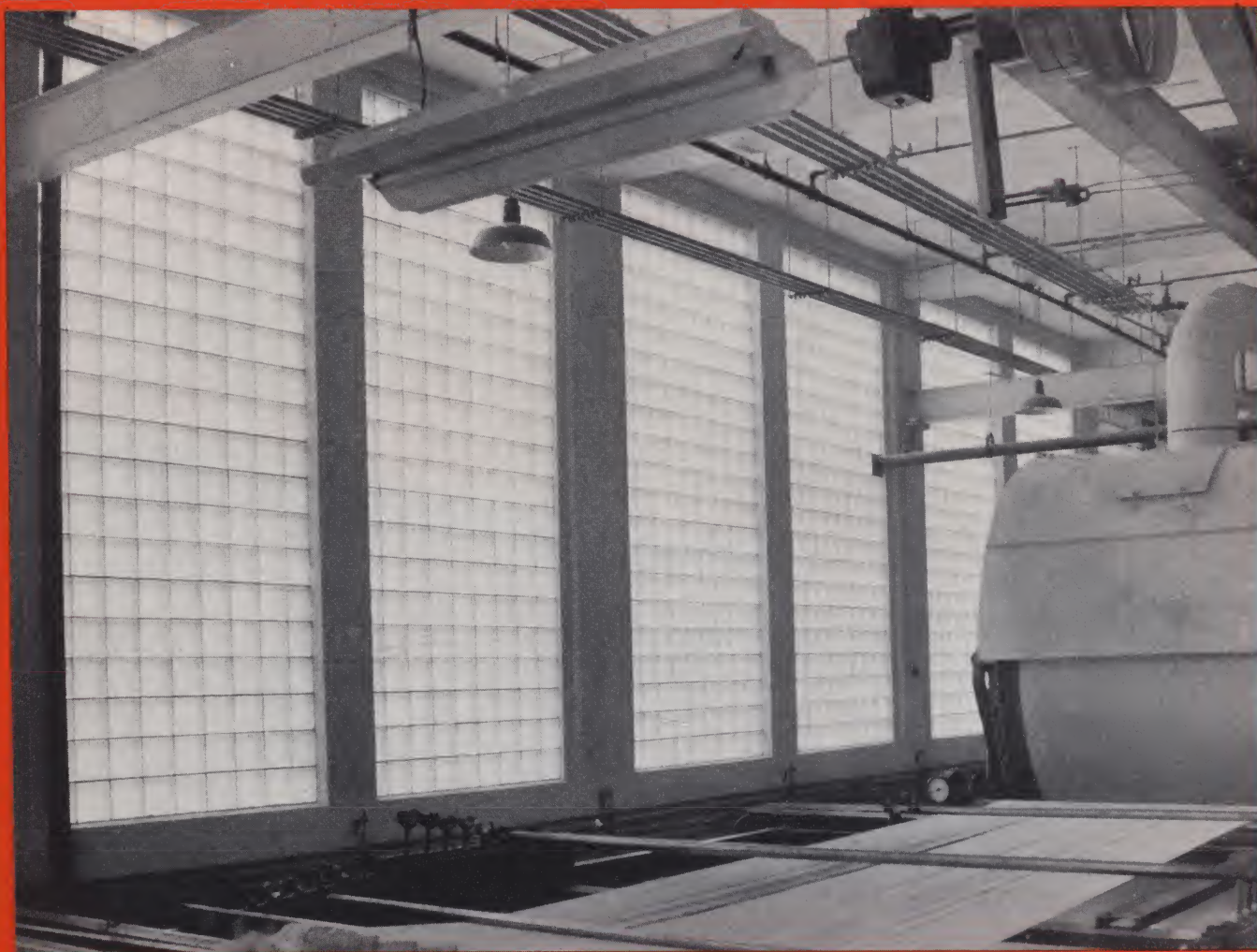
good-looking industrial buildings

This photograph of the Foundry and Press Room of the Brake Shoe and Castings Division, American Brake Shoe Co., Meadow Lands, Pa., illustrates the effectiveness of glass blocks in large plants. In addition to supplying an abundance of light, the panels of PC Glass Blocks are easily kept clean, inside and out. Architect: Harry Lucht.



Shepard's Citations, a printing and publishing establishment at Colorado Springs, Colo., presents a pleasing outside aspect, affords comfortable surroundings for workers. PC Glass Blocks are economical, too, for they seldom if ever need repairs or replacements. Architects: Thomas & Sweet.





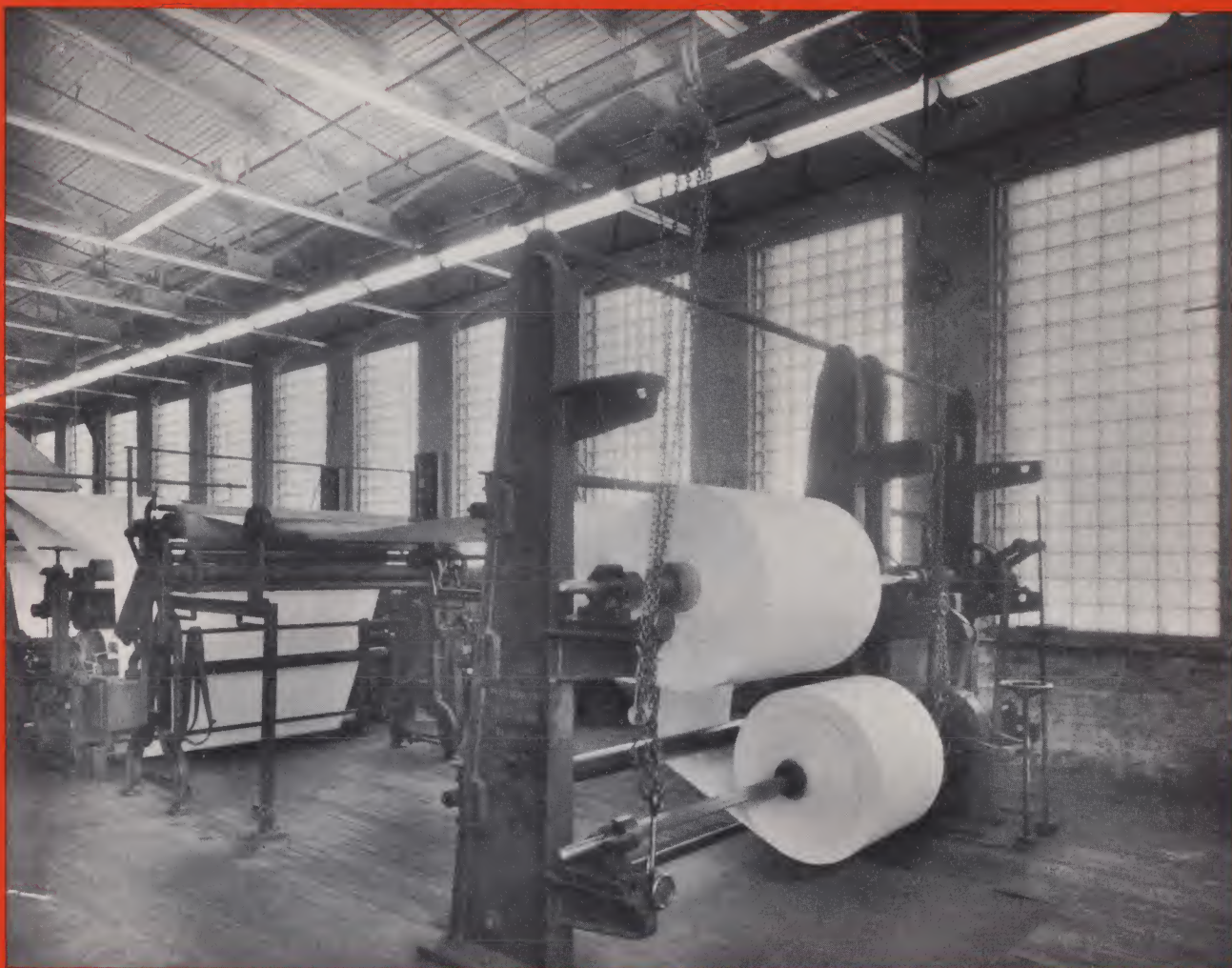
Since the Bates Manufacturing Company, Lewiston, Maine, replaced ordinary sash with PC LX Glass Blocks, softly diffused daylight enables workers to perform their tasks comfortably. Annoying brightness is eliminated and solar heat transmission is reduced.



In meat-packing houses, some rooms must be cold, others hot, in spite of outdoor temperatures. Because they possess a dead-air space between the two surfaces of glass, PC Glass Blocks provide effective insulation, assuring better control of temperature. Photo shows a packing and smoke room of the DuQuoin Packing Co., DuQuoin, Ill.



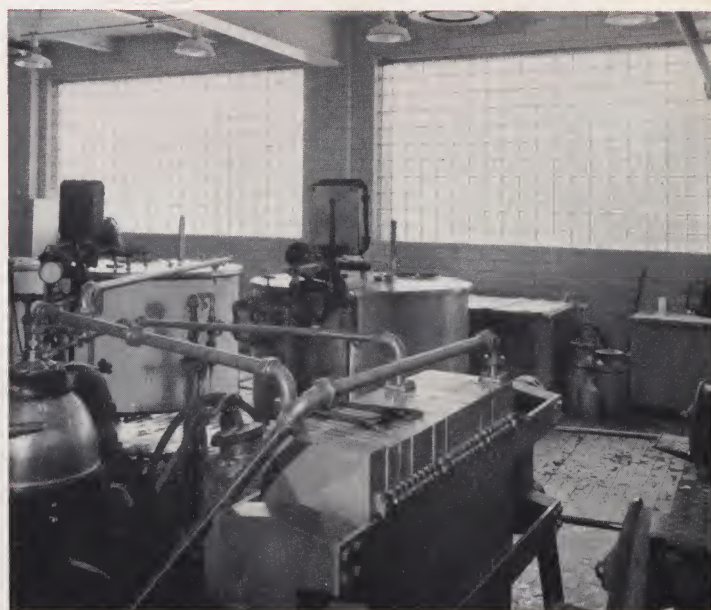
Plenty of daylight is admitted into this drafting room of the Mojonier Bros. Co., Chicago, Ill., through the panels of PC Prism A Glass Blocks. Light is directed and diffused over large working areas—even desks far away from the outside wall are supplied with light.



In this paper mill—Collins Manufacturing Co., North Wilbraham, Mass.—temperature and humidity control is essential. The panels of PC Glass Blocks reduce heat loss, virtually eliminate condensation on light areas. And the big glass block panels are easy to keep sparkling clean.

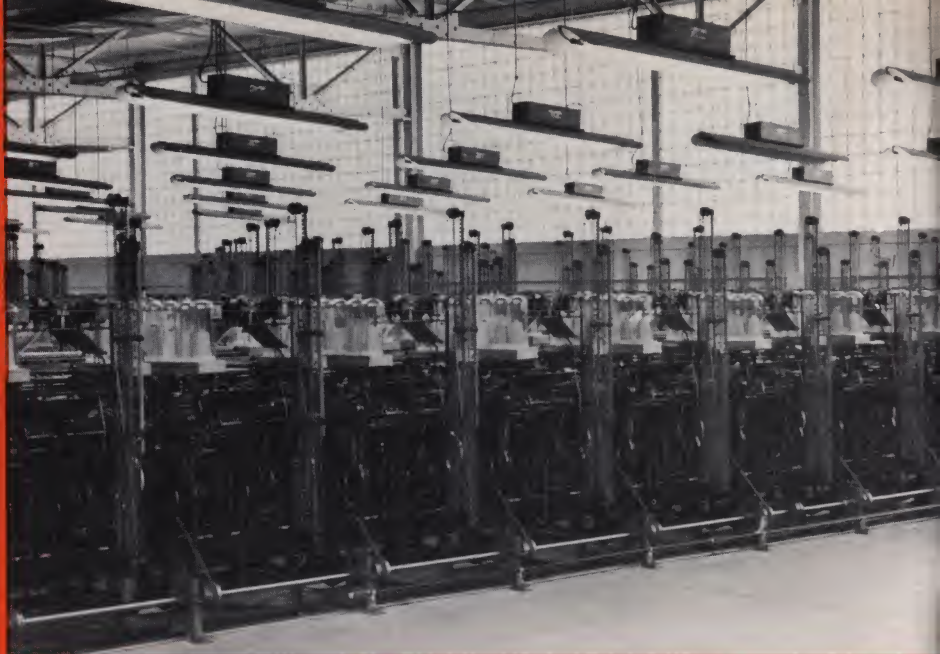


In plants where chemicals are made or used, it pays to avoid window construction that is highly susceptible to acid atmosphere. Wood and steel sash require frequent and costly maintenance under such conditions. Because they are unaffected by common acid atmospheres PC Glass Blocks lower maintenance costs in this laboratory of the Scholler Brothers, Inc., Philadelphia, Pa. Architect: Horace W. Castor.



In this milk-processing room of the Harmony Dairy Co., Pittsburgh, Pa., PC Glass Blocks were used to provide plenty of light without brightness, to exclude dust and dirt from the processing area. Panels of PC Glass Blocks are easy to clean . . . the entire panel can be cleaned as a unit by wiping with a damp cloth, or by using a hose and brush.

Hosiery mills, with their finely-adjusted machinery, can't take chances with temperature changes; so, many mills are air conditioned. To help air-conditioning equipment keep temperatures within close tolerances—and to lessen the load on that equipment—many mills, like the Dexdale Hosiery Mill of Jasper, Ala., are lighted with big panels of PC Glass Blocks.



The Air King Products Co., Brooklyn, N. Y., manufactures radio parts. Such detail work demands good daylighting and the exclusion of outside dust and dirt. PC Glass Blocks take care of these requirements and also help to maintain comfortable inside temperatures. Architects: S. J. Kessler & Sons. General Contractors: K. & L. Construction Co., Inc.



Pureness of product, government inspection, and public good will demand that every part of food plants, such as this St. Louis Ice Cream Company plant, be spotlessly clean. PC Glass Blocks help such plants meet top sanitation requirements, give an abundance of light, reduce maintenance costs. Glass blocks are easy to clean, help keep out contaminating elements. Architect: Benjamin Shapiro.

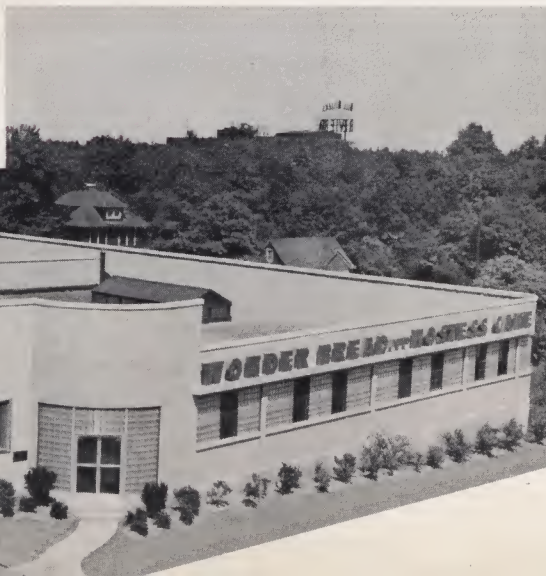




PC Prism A Glass Blocks were used in this Diesel locomotive service and repair shop of the Great Northern Railway, Havre, Mont., to direct a large amount of daylight over the working areas—even to the far walls of the shop. This increases usable floor space, reduces cost of artificial lighting.



The Micromatic Hone Corp., Detroit, Mich., used PC Functional blocks to eliminate traffic noise and to provide suitable insulation for air conditioning. Vue blocks permit employees to check outside weather conditions, and, when used in interior partitions, assist supervisory people in observing movements of personnel. At the same time confidential information is kept private.



PC Glass Blocks help make this Engineering Research Laboratory of the Continental Baking Co., Inc., Fort Lee, N. J., an attractive building, both inside and out. In addition to its handsome outside aspect, the building is also so well lighted on all sides that no artificial light is required inside during the day.



PC Glass Blocks for corrosion



These before and after pictures of The International Trade Mart in New Orleans, La., show how an old building was transformed into a thoroughly modern mercantile landmark—largely by the lavish use of PC Glass Blocks. The new Mart initiates a new advance in international merchandising. The ultra-modern building, air-conditioned throughout, contains corridors of super-lighted display rooms, in which domestic and foreign products are presented to prospective buyers. Architect: Rathbone de Buys.

-resistant sash replacements



These before and after photographs of Haffner Associates, Inc., Long Island City, N. Y., show the replacement of worn sash with PC Glass Blocks. The use of these blocks is readily adaptable to budgets. In a sash replacement program, you can do the complete job immediately or extend it over a period of months or even years. And by replacing troublesome sash with glass blocks you also improve operating conditions, reduce maintenance costs. The insulating value of glass blocks reduces heat losses, minimizes condensation. Panels need no paint, rarely if ever need repairs or replacements.



Panels of PC LX Glass Blocks were used to replace ordinary sash which could not withstand the warm, humid, acid atmosphere of the Morgan Dyeing and Bleaching Co., Rochelle, Ill. Where so many other materials rot, rust, check, or warp under such conditions, PC Glass Blocks remain unaffected. Glass blocks diffuse daylight, cut down heat losses and condensation.

PC Glass Blocks for cheerful,

The Coulter's Dry Goods Company store in Los Angeles, Calif., is smart both inside and out—an important factor in retail selling. Panels of PC Glass Blocks provide ample daylight. Their clear color helps selling, for it allows customers to see goods in their true colors. Architect: Stiles O. Clements.



PC Glass Blocks were used by the Franklin Federal Savings & Loan Association, Richmond, Va., to make this establishment a cheerful, friendly place in which to do business. The glass block panels deaden outside noises, cut off unattractive views. PC Glass Blocks are adaptable to all styles of architecture—give any building a smart, modern look. Architect: Edward F. Sinnott.

inviting commercial buildings

It's a pleasure to attend an attractive theatre like the Tylon, Forest Hills, L. I., N. Y. The smart, decorative glass block tower bespeaks a modern, comfortable house with the best pictures. Whether your theatre is large or small, there are places where PC Glass Blocks can be used to give it extra appeal, make it more inviting to movie-goers. Architect: A. H. Salkowitz.



The use of a modern material like PC Glass Blocks in the Lake Geneva Regional News Building, Lake Geneva, Wis., indicates to the public that here is a progressive, up-to-date printing establishment. The panels are easily maintained, too . . . they can be cleaned as a unit with a damp cloth or with hose and brush. No special cleaning materials are needed. Architect: James R. Allen.

Panels of modern, translucent PC Glass Blocks admit plenty of diffused daylight into this office. They also exclude distracting noises. Glass blocks are smart in appearance, harmonize with modern furnishings, and are easy to keep clean. And you don't have to wait for PC Glass Blocks—they're available now! Builders-Engineers: Albert A. Lutz Co., Inc.

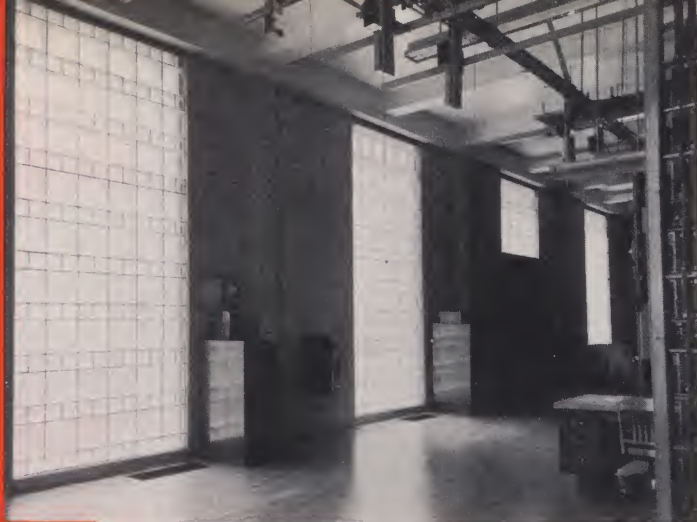


This unusual application of PC Glass Blocks in Mammy's Waffle Shop, Atlantic City, N. J., is both decorative and practical. The glass blocks not only give light and color to the interior but also provide an easy-cleaning, hard-to-ma-counter base. Since light can travel through the blocks, there are no dark spots. Architect: Norman Dimen.



A partition of PC Glass Blocks combined with wood paneling forms a very effective background for this display room of the Eterna Watch Co., New York, N. Y. While admitting light into the adjoining room, the glass blocks also assure complete privacy. Designers: F. V. Gerstel and A. F. Styne.





At the Dixie Exchange, Citizens Telephone Co., Lakeside Park, Ky., multiple sizes of PC Decorative Glass Block patterns are combined to create this interesting panel design. The high insulating properties of PC Glass Blocks help keep temperature and humidity within the close tolerances required by the delicate telephone equipment. Architect: Harry Hake, Jr.



PC Glass Blocks help make the store front of this restaurant in Reading, Pa., eye-catching, inviting. The various decorative patterns of PC Glass Blocks lend themselves to unusual lighting effects.



Here is another example of the adaptability of PC Glass Blocks to practically any architectural need. Decorative patterns of PC Glass Blocks have been used in this unusual curved wall of the Edgewater Hotel, Madison, Wis. Architect: Lawrence Monberg.



An attractive store attracts new business—assures return business. In Belk's Department Store, Greensboro, N. C., PC Glass Block panels add to the outside appearance of the store, admit lots of softly diffused daylight into the interior . . . customers can see the true colors of merchandise . . . employees have better working conditions, do better work. Architect: C. C. Hartman.

The atmosphere of the employees' cafeteria of the North American Life & Casualty Co., Minneapolis, Minn., is cheerful, gay. PC Glass Blocks add to the attractiveness of the room, reduce the load on the air-conditioning system. Glass blocks are easy to keep clean—a quick wipe with a damp cloth keeps them shining. They won't mar, scratch, craze. Architects: Lang & Raugland.



PC Glass Blocks for attractive,



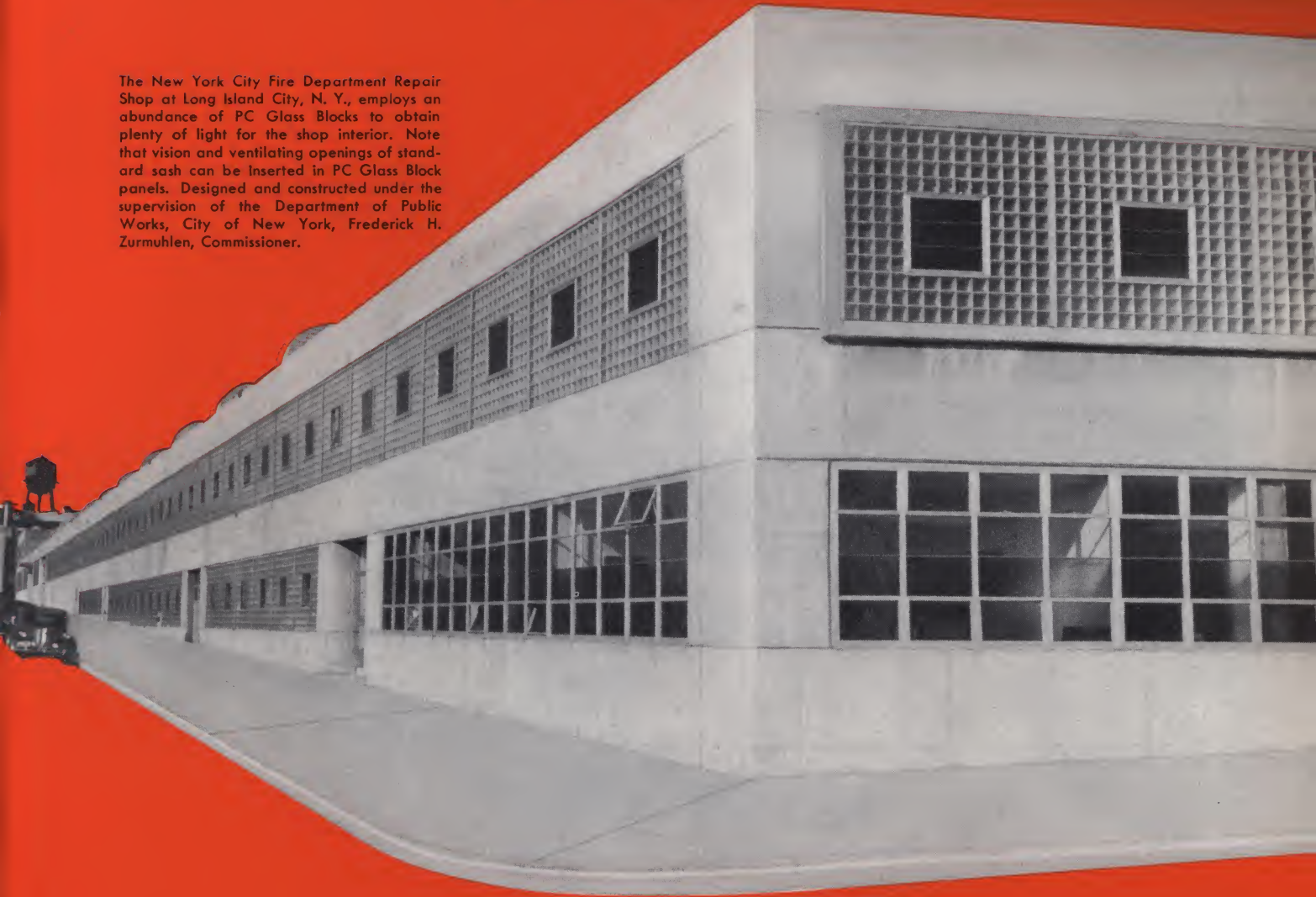
In this power house turbine room of the New York State Electric & Gas Corp., Bainbridge, N. Y., large light-transmitting areas of PC Glass Blocks send daylight well back into the room. And being insulated, they prevent the great heat loss that would be experienced if single glazed sash were used. The panels require no painting, seldom need repairs or replacements . . . so they keep maintenance costs to a minimum. Engineers: Gilbert Associates, Inc.

PC Glass Blocks were used for their light-diffusing qualities in the Pump and Blower House of the Bowery Bay Sewage Treatment Works, Astoria, L. I., N. Y. Such panels harmonize with any style of architecture . . . cut off distracting views . . . afford maximum privacy. Designed and constructed under the supervision of the Department of Public Works, City of New York, Frederick H. Zurmuhlen, Commissioner.



economical public buildings

The New York City Fire Department Repair Shop at Long Island City, N. Y., employs an abundance of PC Glass Blocks to obtain plenty of light for the shop interior. Note that vision and ventilating openings of standard sash can be inserted in PC Glass Block panels. Designed and constructed under the supervision of the Department of Public Works, City of New York, Frederick H. Zurmuhlen, Commissioner.



PC Glass Blocks admit abundant daylight into the interior of this attractive pumping station, and at the same time confine machinery noises. Maintenance of the panels is easy; complete privacy is assured.





This beautiful church has made lavish use of PC Glass Blocks—above the entrance, as interior partitions, and for outer panels that guard the privacy of worshippers. Architect: J. Hale Smyth.



In auditoriums PC Glass Blocks are used to transmit daylight generously, and even to diffuse or direct the light, depending on the pattern used. In the Burlington Memorial Auditorium, Burlington, Iowa, PC Glass Blocks help make this a smart, modern building, inside and out . . . also keep out distracting noises. Architect: Robin B. Carswell.



In this delivery room of the Elizabeth Steel Magee Hospital, Pittsburgh, Pa., PC Glass Blocks prove their practical advantages. A large supply of diffused daylight is essential here—and PC LX Glass Blocks supply it. They also insulate effectively against outside noises, permit better control of temperature and humidity . . . and they're easy to keep spotlessly clean.



← In St. John's Hospital, Tulsa, Okla., PC Glass Blocks are used in stairwells, corridors, and rest rooms. Glass blocks mean savings on window maintenance, on heating and air conditioning, and on artificial lighting. Architect: Leon B. Senter. General Contractors: Hutter Construction Co.



PC Glass Blocks help make the employees' cafeteria of the Missouri Pacific Hospital, St. Louis, Mo., a bright, cheery, clean place. Attractive PC Glass Blocks are easy to clean. They admit daylight, yet retain maximum privacy. Glass blocks can be effectively combined with other building materials.



This photograph shows how PC Soft-Lite Prism B Glass Blocks are used—with ventilators and vision strip of standard sash—in the M. E. Foster Elementary School, Houston, Texas. The PC Glass Block panels harmonize attractively with the building's modern design. Architect: Vance D. Phenix. Coordinating Architect: Stayton Nunn.



Stairwells in schools should be well-lighted so hurrying students will be safe from dangerous falls. PC Glass Block panels admit an abundance of daylight to such areas, add to the appearance of the building. Architect: Gilbert A. Johnson.



At the Carle Place School, Carle Place, N.Y., PC Soft-Lite Prism B Glass Blocks have been used in the PC Vision-Lighting Plan on sun exposures. To "share the light" between classrooms and corridors, interior panels of decorative PC Glass Blocks were utilized. Architects: Knappe & Johnson.



The problem of how to light a gymnasium adequately and safely was solved at the Mt. Prospect Elementary School, Mt. Prospect, Ill., by installing panels of PC Prism A Glass Blocks. The blocks guard the privacy of students while they play and minimize the danger of breakage. Further, heating and air-conditioning costs are drastically reduced when large light-transmitting areas like these are insulated. Architects: Childs & Smith.



Panels of PC Prism A Glass Blocks in this classroom at the Catholic Memorial High School, Waukesha, Wis., provide ample soft lighting for seeing tasks. And the insulating value of PC Glass Blocks prevents excessive heat losses, increases comfort of pupils and teachers, reduces fuel costs. Architects: Brust & Brust.



The use of PC Soft-Lite Prism B Glass Blocks in the uniquely-designed Overlook Hills Elementary School, Abington Township, Pa., means lighter, more cheerful classrooms for that school. PC Glass Blocks safeguard pupils' health, promote efficiency, by assuring a generous supply of directed light for better sight. Architects: MacKenzie & Wigmore.



This exterior view of the Parchment School, Parchment, Mich., shows how PC Soft-Lite Prism B Glass Blocks add to the outside aspect of a building. They also reduce maintenance costs, for glass blocks are easy to clean, seldom if ever need replacements. The problem of broken windows—which is sure to exist wherever children play—is minimized with panels of glass blocks in light-transmitting areas. Architect: M. C. J. Billingham.



The Wilson Elementary School, Little Rock, Arkansas, is a splendid example of how PC Functional Glass Blocks add a highlight of beauty to a school's architecture. Architects: Trapp & Clippard.



The directed light from panels of PC Soft-Lite Prism B Glass Blocks reaches even the far wall of this classroom in the Edward Everett Elementary School, Detroit, Michigan. And all over the room, daylight is adequate, soft and evenly diffused. Architects: Giffels & Vallet, Inc.; L. Rosetti.

SURFACE CONDENSATION

Due to the high insulating value of PC Glass Blocks, condensation will not start forming on the room side of glass block panels until the outside air has reached a temperature much lower than that necessary to produce condensation on single-glazed windows. In the LX blocks, the better insulation value provided by the double cavity means even less chance for condensation—even at high temperature and humidity levels.

(For example, the chart shows that with inside air at 70° F. and relative humidity at 40%, condensation will not begin to form on the interior surfaces of a panel of single cavity glass blocks until an outdoor temperature of minus 14° F. is reached. Under similar conditions with single-glazed steel sash, moisture will begin to form when the outdoor temperature reaches 33° F. Of course, double cavity blocks further reduce the temperature at which condensation will occur.)

THERMAL INSULATION

PC Glass Blocks enclose a partial vacuum and have excellent insulating properties. In winter, they help to reduce fuel costs, permit the use of smaller, less expensive heating systems. In summer, they reduce the load on ventilating and cooling systems.

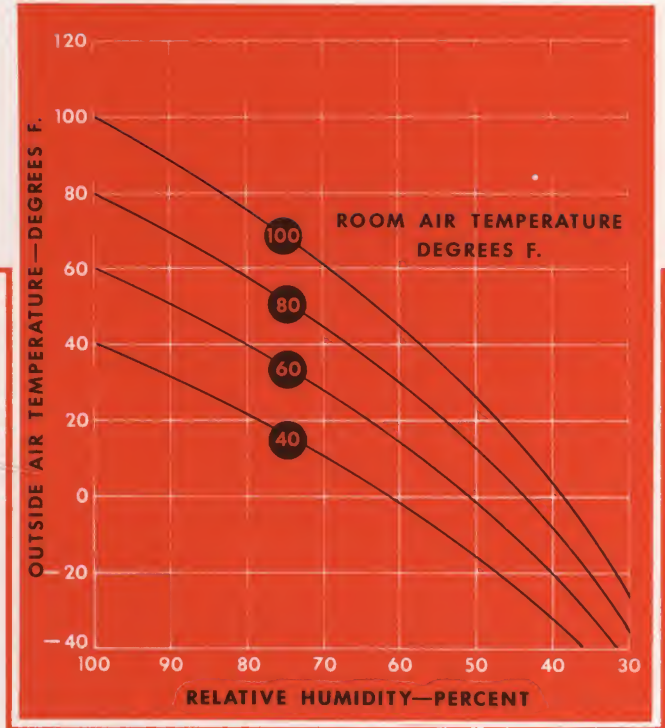
Coefficients of Transmission (U) for Walls of Hollow Glass Block†

GLASS BLOCK Description	"U" (Btu/hr./sq.ft./°F.)
6" Square	0.60
8" Square—Single Cavity	0.56
8" Square—Double Cavity (with fibrous glass screen insert—LX designation)	0.48

Note: Flat glass, single glazed in metal sash, has a "U" value of 1.13. PC Glass Blocks have about twice the insulating value.

† Data from Table 20 of Chapter 9, "Heat Transmission Coefficients of Building Materials," HEATING, VENTILATING & AIR CONDITIONING GUIDE, 1952.

Outdoor temperature required to produce condensation on the room side surface of PC Glass Block panels



Total instantaneous rates of heat gain resulting from direct and diffuse solar radiation transmission by—and convection and radiation from—unshaded walls of 8" hollow glass block*

For clear atmospheres ** and 18 deg. declination, north (August 1) and 40 deg. north latitude, for 75° F. indoor temperature ***

SUN TIME	DRY BULB (outdoor)	Instantaneous heat gain in Btu per (hr.) (sq. ft.)																							
		GLASS BLOCK TYPE ****																							
		I						II						III						IV A					
	F	N	E	SE	S	SW	W	N	E	SE	S	SW	W	N	E	SE	S	SW	W	N	E	SE	S	SW	W
8 a.m.	77	7	118	70	8	6	6	7	109	65	8	6	6	6	93	54	7	5	5	5	80	44	6	4	4
9	80	7	94	76	17	8	9	7	85	71	16	8	9	6	73	62	14	7	8	5	73	60	12	6	7
10	83	10	67	69	29	10	11	10	66	67	28	10	11	8	58	60	24	9	9	7	63	66	23	8	8
11	87	12	44	56	39	14	14	12	43	55	39	14	14	10	40	52	35	12	12	9	40	57	38	11	11
12	90	14	24	41	42	24	16	14	24	41	42	24	16	12	22	38	40	20	14	11	21	41	45	18	13
1 p.m.	93	16	29	38	46	34	20	16	28	37	46	34	20	14	25	34	42	32	18	13	25	39	45	31	17
2	94	17	46	48	42	44	36	17	45	46	41	44	36	15	37	39	37	43	34	14	42	45	36	42	33
3	95	18	77	60	33	51	48	18	68	55	32	51	48	17	56	46	30	50	47	16	56	44	28	49	46
4	94	18	107	60	23	51	50	18	98	55	23	51	50	17	71	44	22	50	49	16	58	34	21	49	48
5	93	17	113	48	19	49	48	17	103	44	19	49	48	16	74	35	18	48	58	15	54	25	17	47	57
6	91	20	80	28	15	39	39	20	77	26	15	36	39	19	57	23	14	38	48	18	36	16	14	38	47

* Data from Tables 23, 24 and 25 of Chapter 12, "Cooling Load", Heating, Ventilating & Air Conditioning Guide, 1952

** For industrial atmospheres, reduce total gain for day 20% on east and west elevations; 5% on south elevations.

*** For each degree that design room temperature exceeds 75° F., subtract 0.5 from values shown. For each degree that outdoor dry bulb temperature exceeds 95° F., add 0.5 to values shown.

**** Data may be applied to 8" PC Glass Blocks as follows: Type I —Argus, Argus Parallel Flutes, Decora, Vue
Type II —Bristol 55
Type III —Soft-Lite Bristol 55 LX
Type IV A—Soft-Lite Essex B 55
Type V —Prism A 55, Soft-Lite Prism B 55

STRUCTURAL STRENGTH

PC Glass Block panels have a compressive strength of 400 to 600 pounds per square inch. This is well above that of many accepted masonry constructions.

However, glass block construction should never be used for load-bearing walls or panels. Adequate provision must be made for the support of construction above glass block panels. Also expansion joints must be provided—at heads only of small panels (25 sq. ft. or less in area) in both interior and exterior walls, at heads of large panels (over 25 sq. ft. in area) in interior walls, and at heads and jambs of large panels in exterior walls.

BOND STRENGTH

PC Glass Blocks have a special resilient, plastic coating on all mortar edges. This insures a complete and permanent bond

between the glass and the cement mortar and provides a panel construction having a high degree of resistance to wind and weather.

WIND LOAD RESISTANCE

From wind pressure tests made on PC Glass Block panels, it has been determined that, within the area limits recommended, panels will withstand a safe wind load of 20 pounds per square foot with a safety factor of at least 2.7.

WEATHER RESISTANCE

PC Glass Block panels give satisfactory service under all sorts of weather conditions. Under severe weather cycle tests (heat, water spray, and freezing at 0° F. to minus 40° F.) panels show no signs of deterioration.

COMPARATIVE LIGHT TRANSMITTANCE

Under identical conditions of exterior illumination and room details, the illumination of a mid-room desk top from unshaded panels of PC Functional Glass Blocks shows, when compared with the performance of other fenestrations, the higher *useful* light transmittance attainable through their optical control characteristics. In considering the figures shown below, it

should be remembered that the brightness of an unshaded window or PC Decorative Glass Block panel will be unbearably high and glaring on any elevation of spaces in which critical seeing tasks are performed. Thus, mid-room performance comparisons can be made fairly, only if the window or decorative panel is adequately shaded to eliminate glare.

Illumination from Sky Only



Illumination from Sky and Sun



Relative illumination* to be expected in middle of typical rooms lighted by panels of PC Glass Blocks as compared with illumination from a clear, unglazed opening of the same size.

Lighted by Sky Only	F E N E S T R A T I O N	Lighted by Sky & Sun**
100.....	... Clear opening (unglazed).....	500
	Glass Block Panel composed of:	
	PC FUNCTIONAL PATTERNS	
39.....	... 12" Prism A 55.....	Not recommended on sun exposures
31.....	... 8" Prism A 55.....	Not recommended on sun exposures
23.....	... 8" Soft-Lite Prism B 55.....	225
23.....	... 12" Soft-Lite Prism B 55 LX.....	225
25.....	... 8" Soft-Lite Bristol 55 LX.....	125
	PC DECORATIVE PATTERNS	
45.....	... 8" Argus, Argus Parallel Flutes, Decora and Vue.....	225

*Arbitrary units based on clear, unglazed opening and panel areas equal to 25% of floor area. Clear opening, lighted by sky only, arbitrarily assigned a value of 100; lighted by sky and sun, assigned a value of 500. Individual panel values are proportional to the value at the top of the same column. This is not a comparison of performance "with" and "without" incident sunlight.

**Sun normal to panel, altitude 45°.

Facts about PC Vision-Lighting Plan

Where solid panels of PC Glass Blocks are not practical, such as in non-air-conditioned or poorly ventilated rooms—or where it is desired to avoid a “shut-in” feeling for room occupants—the Pittsburgh Corning Corporation recommends the PC Vision-Lighting Plan. This construction for daylight openings consists of orientation-keyed areas of

PC Functional Glass Blocks (selected for sun or non-sun exposure) used with vision-ventilation areas as required. The latter areas may be of clear-glazed sash or PC Vue Glass Blocks combined with ventilating units. Standard sash and frames for use with PC Glass Blocks are readily available from many sash manufacturers.

DAYLIGHT CONTROL WITH PC FUNCTIONAL GLASS BLOCKS

PC Functional Glass Blocks have been especially designed for use in factories, offices, stores, hospitals, schools—wherever close work demands good daylighting—to help promote efficiency and eye comfort.

In recent years, people concerned with lighting—whether by natural or artificial means—have become more aware of the significance of brightness in lighting problems. Having enough light for comfortable seeing is important, but of at least equal importance in designing a daylighted interior is the matter of brightness balance. Balanced brightnesses are achieved through proper coordination of illumination levels with the colors or reflectances of the various surfaces in the room.

In locations where critical seeing tasks are to be performed, ceilings, walls, floors and furnishings should have high average reflectances.

In addition to the balanced brightnesses of these interior surfaces, attention must also be given to the brightnesses of the light source. With PC Functional Glass Blocks, the most exacting daylight control and distribution requirements can be met without shading. In properly decorated rooms, they create com-

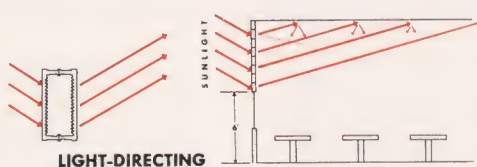
fortably low brightness ratios and adequate illumination levels that conform to architectural and illuminating engineering standards.

Two principal types of functional patterns are available. One type controls light by *bending* or *directing* it upward, the other by *diffusing* it. In both types, it has been possible to seal the controlling medium away from dirt and dust for permanent efficiency. Only the two outside surfaces need to have occasional cleaning to keep the light-transmitting and distributing characteristics of these blocks at maximum effectiveness.

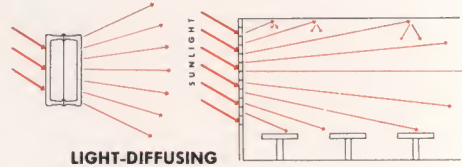
The light-directors—installed above eye

level—have internal prisms that project incident daylight above the visual field and thus distribute illumination with remarkable uniformity throughout the room. Of these, the Prism A 55 block is recommended for elevations exposed to sky light only, the Soft-Lite Prism B 55 for sun exposures.

The light-diffusers—Bristol 55, Soft-Lite Bristol 55 LX and Soft-Lite Essex B 55—break up harsh rays and flood interiors with softly diffused light of high quality. They are recommended where blocks are to be used at and below eye level, or in areas where ceilings are dark or cluttered.



LIGHT-DIRECTING



LIGHT-DIFFUSING

PC CLEAN-EASY FACE FINISH

The faces of all PC Functional Glass Blocks have a factory-applied, transparent coating that prevents mortar and installation scum from adhering to the block panels at the time of construction. This finish cuts in half the time

required for initial cleaning of block panels.

The PC Clean-Easy Face Finish yields a crystal-clean block face that has no rough areas or marks to attract dust, grease or other dirt particles. This means that occasional rain-

fall will keep the exterior of the finished glass block panel clean, thereby retaining the original beauty, light-transmitting efficiency and optical control of the PC Functional Glass Block patterns.

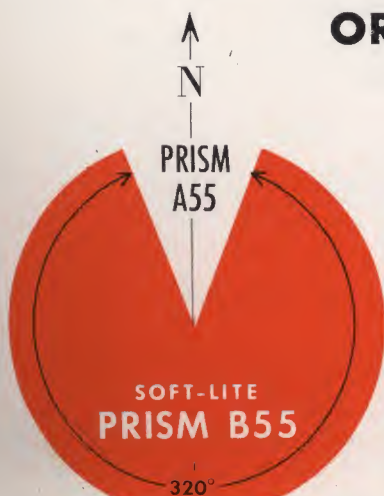
ORIENTATION-KEYED PATTERNS

Daylighting problems on sun and non-sun elevations differ in character and severity. Where an elevation is exposed to direct sunlight, ordinary fenestration may offer too much uncontrolled and poorly distributed illumination, and unbearable direct glare in the visual field.

On north elevations—although there is much less daylight to work with, particularly during the winter months—reflected glare from sun-lit white clouds or nearby buildings

may create a serious brightness control problem on sunny days.

To best satisfy the problems of these varying conditions, a principle of “orientation-keyed” design for daylight control has been established by the “55” line of PC Functional Glass Blocks. Exclusive pattern features developed by the Pittsburgh Corning Corporation assure uniformly comfortable visual environment on every elevation regardless of panel orientation, sun azimuth or sun altitude.



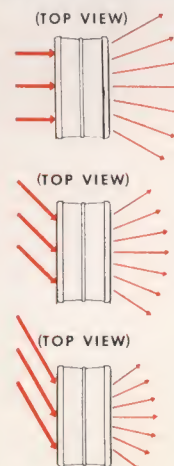
For all practical purposes and for most locations, it can be said that panels facing within 20° of True North do not receive direct sunlight, while those facing all other points of the compass do.

Since there is not as much light available from the North sky as elsewhere, the higher transmittance of the Prism A 55 makes this block particularly suited for use on exposures facing within 20° of True North. On sun exposures, the Soft-Lite Prism B 55, with its different prism design and Soft-Lite edges, transmits and directs adequate light and keeps panel brightness at a minimum, even under severest conditions.



Soft-Lite edge sealed in here

The exclusive PC Soft-Lite Edge Treatment, available in certain functional patterns, eliminates edge glare (formerly a difficult problem on sun exposures) by diffusing the light rays transmitted at the block perimeter. The Soft-Lite edge is the result of fusing a thin layer of opal glass into the welded junction of the two clear glass halves of each block at the time of sealing during manufacture. This diffusing element is a lasting, integral part of the block structure.



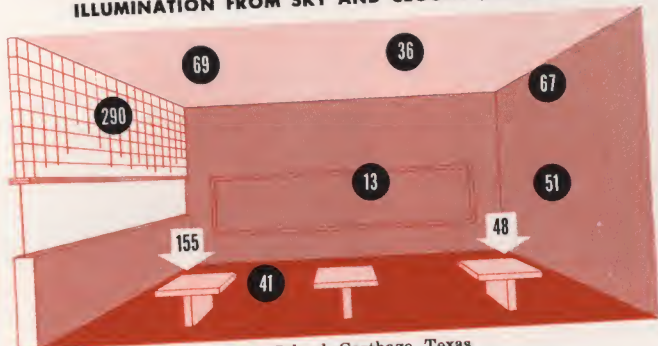
An outstanding design detail of the “55” line of PC Functional Glass Blocks is the spread-lens effect of the shallow, vertical outer-face corrugations. Accepting daylight from wide azimuths, the curvature of these face elements spreads transmitted daylight to the front and rear corners of the room, and aids the internal prism controls in producing low brightness ratios. The smooth, shallow curvatures also offer easy construction cleaning and long term maintenance characteristics that compare favorably with the flat outer-face patterns.

TYPICAL DAYLIGHTING PERFORMANCE IN ACTUAL INSTALLATIONS

The following "on the job" readings are typical of the results obtained from the PC Vision-Lighting Plan. The installations selected are from widely separated communities, proving that the Plan functions well in all latitudes. Continual checks are made of product performance in the field to supplement the laboratory and full scale performance tests conducted on PC Functional Glass Blocks at the Pittsburgh Corning Daylighting Research Center, Port Allegany, Pa., and independent research laboratories.

The performance data shown here includes all of the field variables that cannot be fully evaluated in the photometric laboratory. The figures need not be tempered by safety factors for application to other plans. In fact, although excellent reports have been received from the occupants and architects of these installations, even better performance could be expected with only slightly different design details, such as higher reflectance chalkboards, rotated seating, more complete vision strip shading, etc.

ILLUMINATION FROM SKY AND CLOUDS (NO SUN)

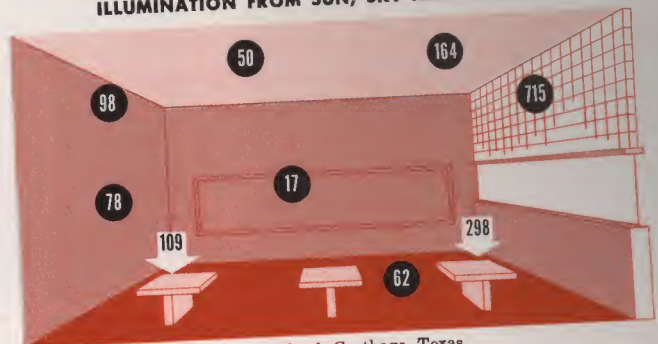


Carthage Junior-Senior High School, Carthage, Texas
Architect: Preston M. Geren

Classrooms: 22' x 29'8", with 11'10 1/2" ceiling
156 sq. ft. glass block panel (23.4% of floor area)
73 sq. ft. vision sash (11.1% of floor area)

North Room: 8" Prism A Blocks
Illumination of Panels: 1530 foot-candles. Canopy shaded vision strip.
Surface Reflectances: Ceiling, 74%; Walls, 70%, 78%;
Chalkboards, 18%; Tackboards, 32%; Floor, 30%.

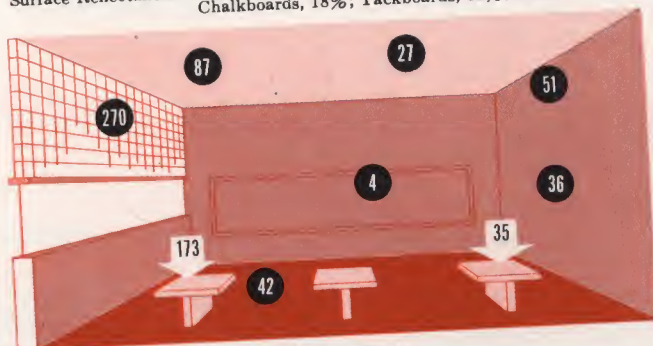
ILLUMINATION FROM SUN, SKY AND CLOUDS



Carthage Junior-Senior High School, Carthage, Texas
Architect: Preston M. Geren

Classrooms: 22' x 29'8", with 11'10 1/2" ceiling
156 sq. ft. glass block panel (23.4% of floor area)
73 sq. ft. vision sash (11.1% of floor area)

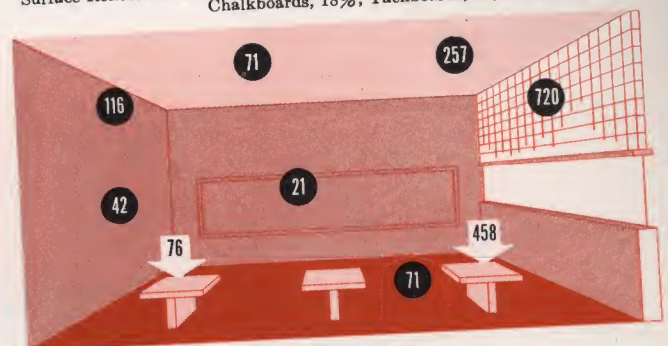
South Room: 8" Soft-Lite Prism B Blocks
Illumination of Panels: 4210 foot-candles; Sun Altitude, 67°-70°;
Sun Azimuth, minus 5° to 25°. Canopy shaded vision strip.
Surface Reflectances: Ceiling, 74%; Walls, 52%, 68%;
Chalkboards, 18%; Tackboards, 32%; Floor, 30%.



Southland Elementary School, Houston, Texas
Architect: J. W. Dehnert

Classrooms: 25'10" x 27'9", with 12'1 1/2" ceiling
144 sq. ft. glass block panel (20% of floor area)
63 sq. ft. vision sash (8.8% of floor area)

North Room: 8" Prism A Blocks
Illumination of Panels: 1240 foot-candles. No shades over vision strip.
Surface Reflectances: Ceiling, 74%; Walls, 78%;
Chalkboards, 10%; Tackboards, 29%;
Floor, 30%; Desk Tops, 45-50%.

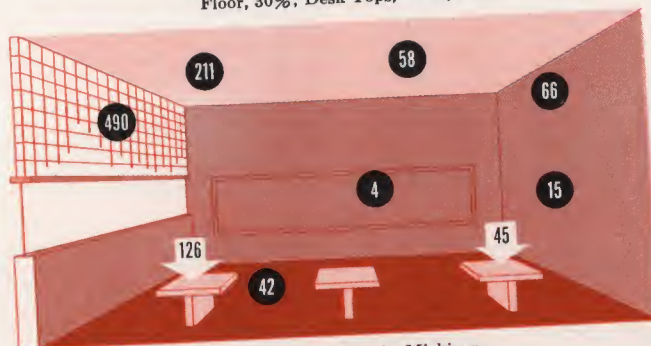


M. E. Foster Elementary School, Houston, Texas
Architect: Vance D. Phenix
Mechanical Engineer: Raymond Jenkins. Structural Engineer: Walter P. Moore

Classrooms: 26' x 27'9", with ceiling height 12'7" at fenestration,
13'2" at inside wall
149 sq. ft. glass block panel (20.7% of floor area*)
110 sq. ft. vision sash (15.2% of floor area)

South Room: 8" Soft-Lite Prism B Blocks
Illumination of Panels: 4250 foot-candles; Sun Altitude, 62°-70°;
Sun Azimuth, 12° to 32°. Roller shades over top half of vision strip.
Surface Reflectances: Ceiling, 76%; Drop Ceiling, 75%;
Walls, 43%; Chalkboards, 10%;
Tackboards, 8%; Floor, 32%; Desk Tops, 38%.

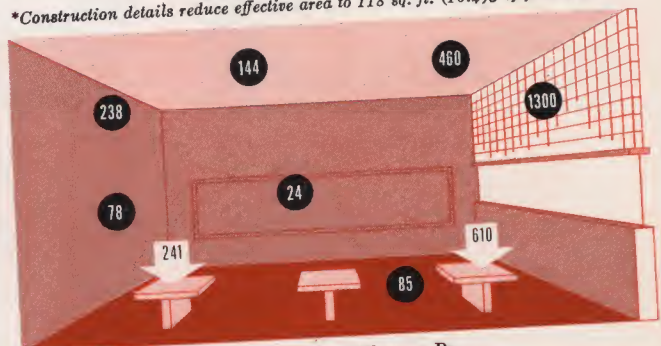
*Construction details reduce effective area to 118 sq. ft. (16.4% of floor area)



Edward Everett Elementary School, Detroit, Michigan
Architects: Giffels & Vallet, Inc.; L. Rosetti

Classrooms: 22' x 30'6", with 12'1" ceiling
183 sq. ft. glass block panel (27.3% of floor area)
80 sq. ft. vision sash (11.9% of floor area)

North Room: 8" Prism A Blocks
Illumination of Panels: 1700 foot-candles. Canopy shaded vision strip.
Surface Reflectances: Ceiling, 75%; Walls, 45%, 50%;
Chalkboards, 10%; Tackboards, 25%;
Dado, 45%; Floor & Desk Tops, 35%.



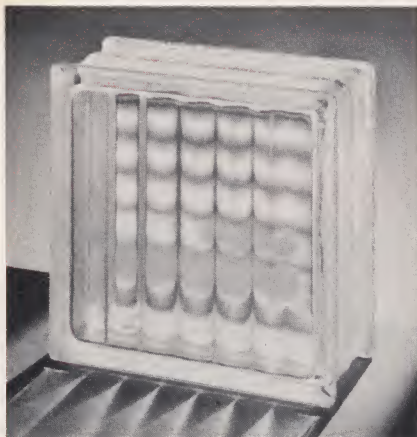
PC Daylighting Research Center, Port Allegany, Pa.

Demonstration Classroom: 24'6" x 32'7", with 11'11" ceiling
192 sq. ft. glass block panel (24.1% of floor area)
79 sq. ft. vision sash (10% of floor area)

South Room: 12" Soft-Lite Prism B 55 LX Blocks
Illumination of Panels: 7500 foot-candles; Sun Altitude, 30°;
Sun Azimuth, 0°. Canopy shaded vision strip.
Surface Reflectances: Ceiling, 74%; Drop Ceiling, 82%;
Walls, 50%; Chalkboards, 14%;
Tackboards, 26%; Floor, 30%; Desk Tops, 40%.

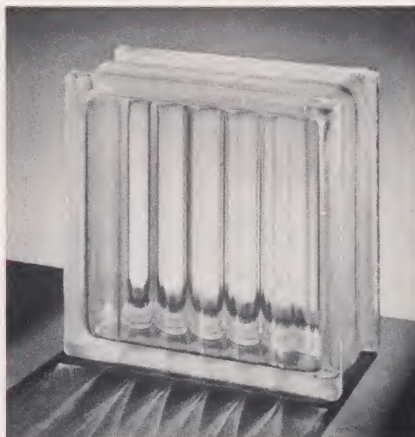
● = Average brightness in foot-lamberts.
↓ = Average illumination in foot-candles.

Decorative Patterns



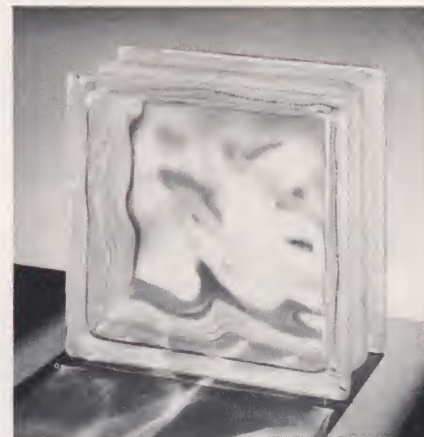
ARGUS

1. An attractive pattern designed for decorative and lighting effects.
2. High light transmission and privacy; bright highlights in sunlight.
3. Can be laid with flutes vertical or horizontal on room side with equally pleasing and efficient results. *Note:* When used in combination with corner or radial blocks, if pattern match is desired, square blocks must be laid with flutes horizontal on room side. Interesting forms and textures can be developed by combining with other patterns and sizes.
4. Pattern description: Smooth outer faces; seven flutes on each inner face, sealed at right angles; grid motif.



ARGUS PARALLEL FLUTES

1. An attractive pattern designed for general use, both decorative and utilitarian.
2. High light transmission; bright highlights in sunlight.
3. Can be laid with flutes vertical or horizontal with equally pleasing and efficient results. *Note:* When square blocks are used in combination with corner or radial blocks, pattern match can be obtained on only one side of panel. Interesting forms and textures can be developed by combining with other patterns and sizes.
4. Pattern description: Smooth outer faces; seven flutes on each inner face, sealed parallel; linear motif.



DECORA

1. A subtle, decorative pattern ideally suited to harmonize with both modern and conventional design.
2. High light transmission, almost transparent; bright highlights in sunlight.
3. Appearance such that it may be laid up without regard to pattern orientation. Interesting forms and textures can be developed by combining with other patterns and sizes.
4. Pattern description: Smooth outer faces; subtle asymmetric design on both inner faces.

Functional Patterns



SOFT-LITE® BRISTOL 55 LX

1. Double cavity light-diffusing pattern for use in daylighting panels on all elevations. Better thermal insulation value than single cavity blocks.
2. An internal fibrous glass diffusing screen and flat, lightly etched inner faces combine with shallow outer-face corrugations and Soft-Lite edge to diffuse the transmitted daylight and distribute it to all parts of the room.
3. For best appearance and highest maintained light transmittance should be laid up as marked. Recommended for good light diffusion and transmission, and where good thermal insulation value is important.
4. Pattern description: Shallow vertical corrugations on outer faces; flat, lightly etched inner faces; fibrous glass screen sealed within block divides interior into two cavities; Soft-Lite® Edge Treatment; marked (in black): \downarrow TOP-IN \downarrow with \downarrow BRISTOL-55-LX \downarrow with "finger-feel" ridges, on top mortar edge.

NOTE: This block comes with the PC Clean-Easy Face Finish. It is supplied in the 7 $\frac{3}{4}$ " square only.



SOFT-LITE® ESSEX B 55

1. Light-diffusing pattern for use in daylighting panels exposed to direct sunlight where glare control is required. Similar in appearance to Soft-Lite Prism B 55.
2. Deep, horizontal, lens-like corrugations on inner faces spread transmitted sunlight and sky light to ceiling and floor. Shallow vertical outer-face corrugations spread light to front and rear walls. Soft-Lite edge maintains diffusing characteristics over entire block face.
3. Performs properly and matches Soft-Lite Prism B 55 only when laid up as marked. Recommended for use at and below eye level in panels with Soft-Lite Prism B 55 blocks.
4. Pattern description: Shallow vertical corrugations on outer faces; deep horizontal corrugations on inner faces; Soft-Lite® Edge Treatment; marked (in green): \downarrow TOP-IN \downarrow with "finger-feel" ridges, on top mortar edge.

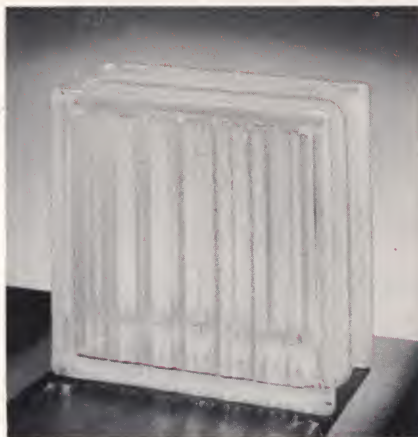
NOTE: This block comes with the PC Clean-Easy Face Finish. It is supplied in the 7 $\frac{3}{4}$ " and 11 $\frac{3}{4}$ " squares only—the larger size with a fibrous glass screen insert.



PRISM A 55

1. Light-directing pattern for use above eye level, in daylighting panels exposed to sky light only (usually those facing within 20° of True North) where good daylighting and moderate glare control for critical seeing tasks are important.
2. Horizontal prisms on two inner faces direct much of the transmitted daylight up to ceiling. Shallow vertical outer-face corrugations spread light to front and rear walls. Result is well-diffused indirect daylighting. High light transmission advantageous on non-sun elevations.
3. Performs properly only when laid up as marked. Use with high reflectance ceilings. Do not use at or below eye level. Use Bristol 55 blocks for portions of panels at and below eye level.
4. Pattern description: Shallow vertical corrugations on outer faces; horizontal prisms on inner faces; marked (in blue): \downarrow TOP-IN \downarrow with \downarrow PRISM-A-55 \downarrow with "finger-feel" ridges, on top mortar edge.

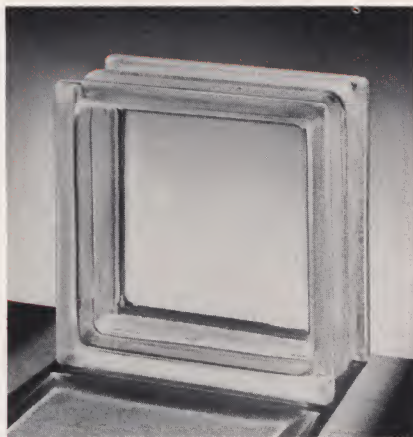
NOTE: This block comes with the PC Clean-Easy Face Finish. It is supplied in the 7 $\frac{3}{4}$ " and 11 $\frac{3}{4}$ " squares only.



SAXON

1. A pleasing pattern designed for moderate light diffusion with good light transmission.
2. Completely obscure; good light transmission; bright in sunlight.
3. Usually laid up with reeds vertical. Interesting forms and textures can be developed by combining with other patterns and sizes.
4. Pattern description: Shallow narrow reeds on outer faces parallel to wide flutes on inner faces; inner faces lightly etched.

NOTE: This block supplied in 11 $\frac{3}{4}$ " square and 5 $\frac{3}{4}$ " corner shapes only.



VUE

1. A transparent pattern with clear flat surfaces. Permits sufficient general vision of large objects or movements beyond the panel to prevent the "shut-in" feeling. Visibility of sharp details not always possible, particularly when observer is far from panel.
2. High light transmission.
3. Pattern description: Clear; smooth outer and inner faces.

NOTE: This block supplied in 7 $\frac{3}{4}$ " square and radial shapes only.



BRISTOL 55

1. Semi-light-diffusing pattern for use in daylighting panels exposed to sky light only, and elsewhere when moderate glare control is required.
2. Flat, lightly etched inner faces combine with shallow vertical outer-face corrugations to disperse transmitted light up and down and to either side.
3. For best appearance match with Prism A 55 and for highest maintained light transmittance should be laid up as marked. Recommended for use at and below eye level in panels with Prism A 55 blocks.
4. Pattern description: Shallow vertical corrugations on outer faces; flat, lightly etched inner faces; marked (in black): TOP on top mortar edge.

BRISTOL-55

NOTE: This block comes with the PC Clean-Easy Face Finish. It is supplied in the 7 $\frac{3}{4}$ " square only.



SOFT-LITE* PRISM B 55

1. Light-directing pattern for use above eye level, in daylighting panels exposed to sunlight—usually those facing south, east or west (more than 20° from True North)—where good daylighting and glare control for critical seeing tasks are important.
2. Two types of horizontal prisms (different type on each inner face) direct major portion of transmitted sunlight and sky light up to ceiling and upper walls. Shallow vertical outer-face corrugations spread light to front and rear walls. Soft-Lite edge transmits softly diffused light, maintains uniformly low brightness across block face and highly pleasing and comfortable panel appearance under sun and/or sky light exposure conditions. Result is well-diffused indirect daylighting.
3. Performs properly only when laid up as marked. Use with high reflectance ceilings. Do not use at or below eye level. Use Soft-Lite Essex B 55 blocks for portions of panels at and below eye level.
4. Pattern description: Shallow vertical corrugations on outer faces; special type of horizontal prism on each inner face; Soft-Lite* Edge Treatment; marked (in red): TOP-IN with "finger-feel" ridges, on top mortar edge. PRISM-B-55

NOTE: This block comes with the PC Clean-Easy Face Finish. It is supplied in the 7 $\frac{3}{4}$ " and 11 $\frac{3}{4}$ " squares only—the larger size with a fibrous glass screen insert.

SIZES AND SHAPES AVAILABLE

(Patterns, shapes, sizes subject to change without notice.)

PATTERNS	5 $\frac{3}{4}$ " Square	7 $\frac{3}{4}$ " Square	11 $\frac{3}{4}$ " Square	5 $\frac{3}{4}$ " Corner	7 $\frac{3}{4}$ " Corner	7 $\frac{3}{4}$ " Radial
DECORATIVE						
Argus	•	•	•	•	•	•
Argus Parallel Flutes	•	•†	•			
Decora	•	•	•	•	•	•
Saxon			•	•		
Vue		•				•
FUNCTIONAL						
Light-Diffusing						
Bristol 55		•			‡	‡
Soft-Lite* Bristol 55 LX		•			‡	‡
Soft-Lite* Essex B 55		•	• #		‡	‡
Light-Directing						
Prism A 55		•	•			
Soft-Lite* Prism B 55		•	• #			

*T.M. Reg. Applied for.

Soft-Lite Edge Treatment (opal glass fused into block junction during manufacture) permits just enough diffused light transmission around block perimeter to create "eye-ease" panel appearance.

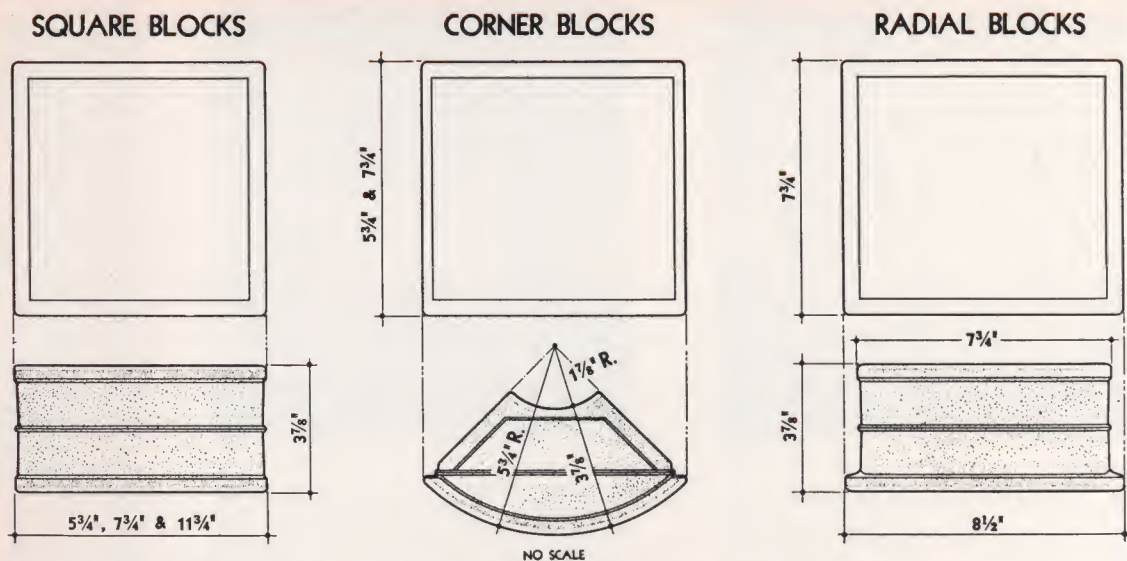
†Also available with a fibrous glass screen insert (LX pattern).

‡Where corner and radial blocks are required, patterns of reasonably close match are available.

#With fibrous glass screen insert (LX pattern) only.

PC GLASS BLOCKS—A MODULAR PRODUCT*

Sizes
and
Shapes
Available



*PC Glass Blocks have Standard Coordinated Dimensions, and meet the requirements of American Standards Association Project A62, and conform to the American Standard Basis for Coordination A62.1-1945.

PC ACCESSORIES

These PC accessory materials can be obtained from all suppliers of PC Glass Blocks.



PITTSBURGH NV-3389 WATERPROOFING COMPOUND—To be added to the mortar to conform with PC specifications. Use one (1) quart per bag of cement. (See Estimating Data on page 38.)

Available in one-quart, one-gallon, and five-gallon containers.



PC OAKUM (Non-staining, dry-rot treated, sliver-type)—To be used as a lateral cushioning for glass block panels by tightly packing between panel faces and the supporting structure. See details for proper application.

For packing both faces of panels laid up in $4\frac{1}{4}"$ wide chases, estimate $2\frac{1}{2}$ lbs. (one tube) for 30 lin. ft. of chase.

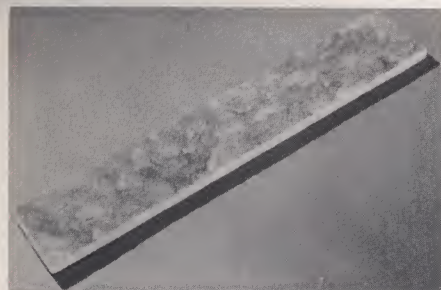
Available in wound tubes, weighing $2\frac{1}{2}$ lbs. net, packaged in handy dispenser cartons. Six individually-packaged tubes per shipping carton.



PC ASPHALT EMULSION—To be used on all sills to form a waterproof joint. Also used to adhere expansion strips to side and head jambs before installing glass blocks. See specifications for proper application.

For sills and adhering of expansion strips estimate one (1) gallon for approximately 150 lin. ft.

Available in one-quart, one-gallon, and five-gallon containers.

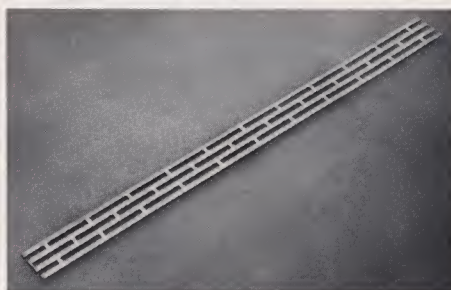


PC EXPANSION STRIPS—To be used in expansion spaces at side and head jambs installed in accordance with PC specifications.

Available in the following size:

$\frac{3}{8}"$ x $4\frac{1}{8}"$ x 25" (For use in chase construction)

For wall anchor construction, standard $4\frac{1}{8}"$ wide strips can easily be cut to 3" width required.



PC WALL ANCHORS—To be used for supporting panels up to 100 sq. ft. in area where permitted by building code requirements. Spaced and installed in accordance with PC specifications. Wall Anchors are No. 20 gage perforated steel galvanized after fabrication.

Available in 2'-0" lengths, $1\frac{1}{4}"$ wide.



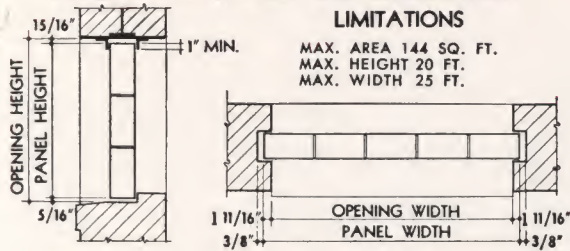
PC WALL TIES—To be used in horizontal joints of glass block panels, spaced and installed in accordance with PC specifications. Wall Ties are formed of two No. 9 galvanized wires spaced 2" apart with No. 14 galvanized cross wires welded every 8".

Available in 8' lengths.

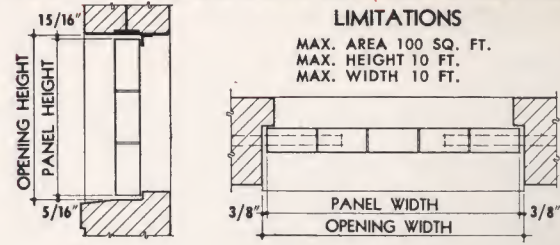
LAYOUT TABLES FOR PC GLASS BLOCK PANELS BASED ON MODULAR COORDINATION

(using 3/8-inch mortar joints in face brick)

TYPE "A"—CHASE CONSTRUCTION



TYPE "B"—WALL ANCHOR CONSTRUCTION



5 3/4" SQUARE BLOCKS 1/4" MORTAR JOINTS

NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	
		MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT
1	5 3/4"	2 3/8"	7"	6 1/2"	7"
2	11 3/4"	8 3/8"	1'-1"	1'-0 1/2"	1'-1"
3	1'-5 3/4"	1'-2 3/8"	1'-7"	1'-6 1/2"	1'-7"
4	1'-11 3/4"	1'-8 3/8"	2'-1"	2'-0 1/2"	2'-1"
5	2'-5 3/4"	2'-2 3/8"	2'-7"	2'-6 1/2"	2'-7"
6	2'-11 3/4"	2'-8 3/8"	3'-1"	3'-0 1/2"	3'-1"
7	3'-5 3/4"	3'-2 3/8"	3'-7"	3'-6 1/2"	3'-7"
8	3'-11 3/4"	3'-8 3/8"	4'-1"	4'-0 1/2"	4'-1"
9	4'-5 3/4"	4'-2 3/8"	4'-7"	4'-6 1/2"	4'-7"
10	4'-11 3/4"	4'-8 3/8"	5'-1"	5'-0 1/2"	5'-1"
11	5'-5 3/4"	5'-2 3/8"	5'-7"	5'-6 1/2"	5'-7"
12	5'-11 3/4"	5'-8 3/8"	6'-1"	6'-0 1/2"	6'-1"
13	6'-5 3/4"	6'-2 3/8"	6'-7"	6'-6 1/2"	6'-7"
14	6'-11 3/4"	6'-8 3/8"	7'-1"	7'-0 1/2"	7'-1"
15	7'-5 3/4"	7'-2 3/8"	7'-7"	7'-6 1/2"	7'-7"
16	7'-11 3/4"	7'-8 3/8"	8'-1"	8'-0 1/2"	8'-1"
17	8'-5 3/4"	8'-2 3/8"	8'-7"	8'-6 1/2"	8'-7"
18	8'-11 3/4"	8'-8 3/8"	9'-1"	9'-0 1/2"	9'-1"
19	9'-5 3/4"	9'-2 3/8"	9'-7"	9'-6 1/2"	9'-7"
20	9'-11 3/4"	9'-8 3/8"	10'-1"	10'-0 1/2"	10'-1"
21	10'-5 3/4"	10'-2 3/8"	10'-7"		
22	10'-11 3/4"	10'-8 3/8"	11'-1"		
23	11'-5 3/4"	11'-2 3/8"	11'-7"		
24	11'-11 3/4"	11'-8 3/8"	12'-1"		
25	12'-5 3/4"	12'-2 3/8"	12'-7"		
26	12'-11 3/4"	12'-8 3/8"	13'-1"		
27	13'-5 3/4"	13'-2 3/8"	13'-7"		
28	13'-11 3/4"	13'-8 3/8"	14'-1"		
29	14'-5 3/4"	14'-2 3/8"	14'-7"		
30	14'-11 3/4"	14'-8 3/8"	15'-1"		
31	15'-5 3/4"	15'-2 3/8"	15'-7"		
32	15'-11 3/4"	15'-8 3/8"	16'-1"		
33	16'-5 3/4"	16'-2 3/8"	16'-7"		
34	16'-11 3/4"	16'-8 3/8"	17'-1"		
35	17'-5 3/4"	17'-2 3/8"	17'-7"		
36	17'-11 3/4"	17'-8 3/8"	18'-1"		
37	18'-5 3/4"	18'-2 3/8"	18'-7"		
38	18'-11 3/4"	18'-8 3/8"	19'-1"		
39	19'-5 3/4"	19'-2 3/8"	19'-7"		
40	19'-11 3/4"	19'-8 3/8"	20'-1"		
41	20'-5 3/4"	20'-2 3/8"			
42	20'-11 3/4"	20'-8 3/8"			
43	21'-5 3/4"	21'-2 3/8"			
44	21'-11 3/4"	21'-8 3/8"			
45	22'-5 3/4"	22'-2 3/8"			
46	22'-11 3/4"	22'-8 3/8"			
47	23'-5 3/4"	23'-2 3/8"			
48	23'-11 3/4"	23'-8 3/8"			
49	24'-5 3/4"	24'-2 3/8"			
50	24'-11 3/4"	24'-8 3/8"			

7 3/4" SQUARE BLOCKS 1/4" MORTAR JOINTS

NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	
		MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT
1	7 3/4"	4 3/8"	9"	8 1/2"	9"
2	1'-3 3/4"	1'-0 3/8"	1'-5"	1'-4 1/2"	1'-5"
3	1'-11 3/4"	1'-8 3/8"	2'-1"	2'-0 1/2"	2'-1"
4	2'-7 3/4"	2'-4 3/8"	2'-9"	2'-8 1/2"	2'-9"
5	3'-3 3/4"	3'-0 3/8"	3'-5"	3'-4 1/2"	3'-5"
6	3'-11 3/4"	3'-8 3/8"	4'-1"	4'-0 1/2"	4'-1"
7	4'-7 3/4"	4'-4 3/8"	4'-9"	4'-8 1/2"	4'-9"
8	5'-3 3/4"	5'-0 3/8"	5'-5"	5'-4 1/2"	5'-5"
9	5'-11 3/4"	5'-8 3/8"	6'-1"	6'-0 1/2"	6'-1"
10	6'-7 3/4"	6'-4 3/8"	6'-9"	6'-8 1/2"	6'-9"
11	7'-3 3/4"	7'-0 3/8"	7'-5"	7'-4 1/2"	7'-5"
12	7'-11 3/4"	7'-8 3/8"	8'-1"	8'-0 1/2"	8'-1"
13	8'-7 3/4"	8'-4 3/8"	8'-9"	8'-8 1/2"	8'-9"
14	9'-3 3/4"	9'-0 3/8"	9'-5"	9'-4 1/2"	9'-5"
15	9'-11 3/4"	9'-8 3/8"	10'-1"	10'-0 1/2"	10'-1"
16	10'-7 3/4"	10'-4 3/8"	10'-9"		
17	11'-3 3/4"	11'-0 3/8"	11'-5"		
18	11'-11 3/4"	11'-8 3/8"	12'-1"		
19	12'-7 3/4"	12'-4 3/8"	12'-9"		
20	13'-3 3/4"	13'-0 3/8"	13'-5"		
21	13'-11 3/4"	13'-8 3/8"	14'-1"		
22	14'-7 3/4"	14'-4 3/8"	14'-9"		
23	15'-3 3/4"	15'-0 3/8"	15'-5"		
24	15'-11 3/4"	15'-8 3/8"	16'-1"		
25	16'-7 3/4"	16'-4 3/8"	16'-9"		
26	17'-3 3/4"	17'-0 3/8"	17'-5"		
27	17'-11 3/4"	17'-8 3/8"	18'-1"		
28	18'-7 3/4"	18'-4 3/8"	18'-9"		
29	19'-3 3/4"	19'-0 3/8"	19'-5"		
30	19'-11 3/4"	19'-8 3/8"	20'-1"		
31	20'-7 3/4"	20'-4 3/8"			
32	21'-3 3/4"	21'-0 3/8"			
33	21'-11 3/4"	21'-8 3/8"			
34	22'-7 3/4"	22'-4 3/8"			
35	23'-3 3/4"	23'-0 3/8"			
36	23'-11 3/4"	23'-8 3/8"			
37	24'-7 3/4"	24'-4 3/8"			
38	25'-3 3/4"	25'-0 3/8"			

11 1/4" SQUARE BLOCKS 1/4" MORTAR JOINTS

NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	
		MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT
1	11 1/4"	8 3/8"	1'-1"	1'-0 1/2"	1'-1"
2	1'-11 1/4"	1'-8 3/8"	2'-1"	2'-0 1/2"	2'-1"
3	2'-11 1/4"	2'-8 3/8"	3'-1"	3'-0 1/2"	3'-1"
4	3'-11 1/4"	3'-8 3/8"	4'-1"	4'-0 1/2"	4'-1"
5	4'-11 1/4"	4'-8 3/8"	5'-1"	5'-0 1/2"	5'-1"
6	5'-11 1/4"	5'-8 3/8"	6'-1"	6'-0 1/2"	6'-1"
7	6'-11 1/4"	6'-8 3/8"	7'-1"	7'-0 1/2"	7'-1"
8	7'-11 1/4"	7'-8 3/8"	8'-1"	8'-0 1/2"	8'-1"
9	8'-11 1/4"	8'-8 3/8"	9'-1"	9'-0 1/2"	9'-1"
10	9'-11 1/4"	9'-8 3/8"	10'-1"	10'-0 1/2"	10'-1"
11	10'-11 1/4"	10'-8 3/8"	11'-1"		
12	11'-11 1/4"	11'-8 3/8"	12'-1"		
13	12'-11 1/4"	12'-8 3/8"	13'-1"		
14	13'-11 1/4"	13'-8 3/8"	14'-1"		
15	14'-11 1/4"	14'-8 3/8"	15'-1"		
16	15'-11 1/4"	15'-8 3/8"	16'-1"		
17	16'-11 1/4"	16'-8 3/8"	17'-1"		
18	17'-11 1/4"	17'-8 3/8"	18'-1"		
19	18'-11 1/4"	18'-8 3/8"	19'-1"		
20	19'-11 1/4"	19'-8 3/8"	20'-1"		
21	20'-11 1/4"	20'-8 3/8"			
22	21'-11 1/4"	21'-8 3/8"			
23	22'-11 1/4"	22'-8 3/8"			
24	23'-11 1/4"	23'-8 3/8"			
25	24'-11 1/4"	24'-8 3/8"			

MODULAR COORDINATION

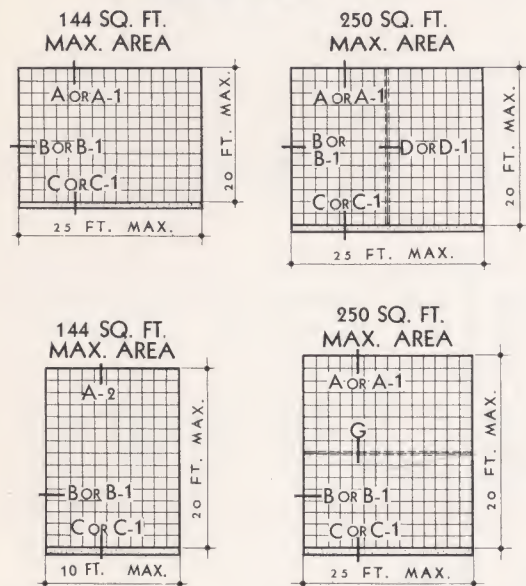
The American Standard Basis for the Coordination of Dimensions of Building Materials and Equipment A62.1-1945 established a standard grid based on a Module of 4". Most producers of masonry products, glass blocks, windows and other building materials have adopted Modular Coordinated Sizes. Modular Installation Details on the following pages show combinations of these materials incorporating basic principles for installing glass blocks. For additional details refer to the "A62 Guide for Modular Coordination" published by Modular Service Association, 110 Arlington Street, Boston 16, Massachusetts.

Exterior Panel Size Limitations with minimum expansion and anchorage requirements

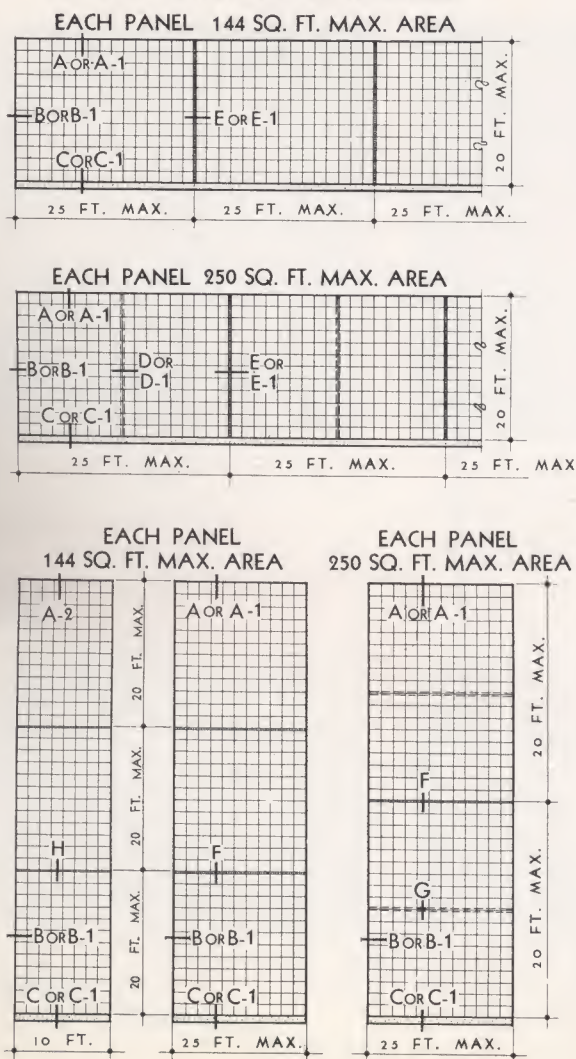
GENERAL: Construction supporting panels over 144 square feet in area must be of a type which will provide for a minimum of movement and settlement.

Structural members shown are to indicate principles of construction. Sizes must be calculated for loads applied. Information shown on these sheets is not intended to conflict with any local building code requirements.

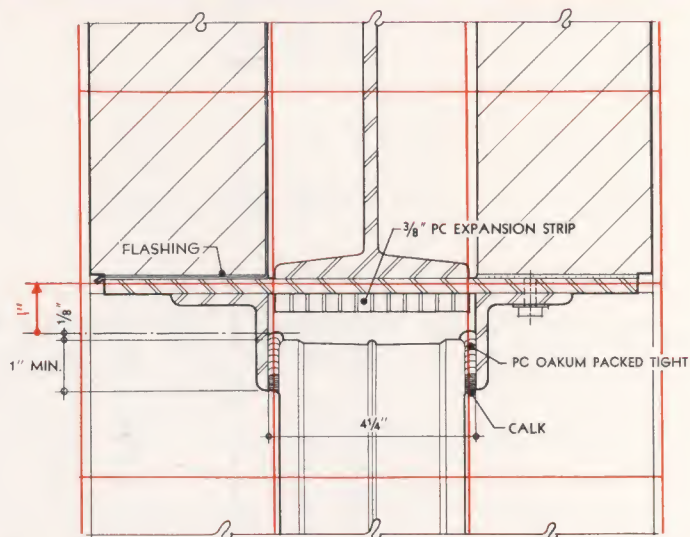
LARGE SIMPLE PANELS



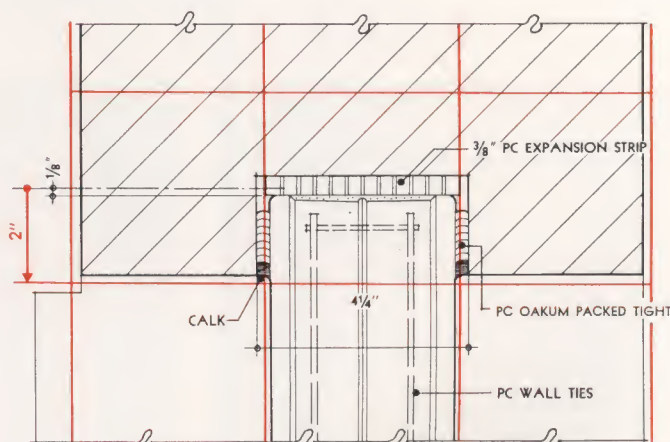
LARGE CONTINUOUS PANELS



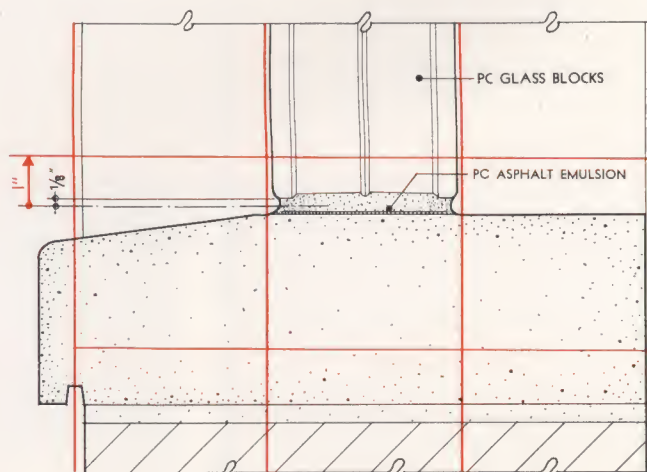
MODULAR



SECTION "A"

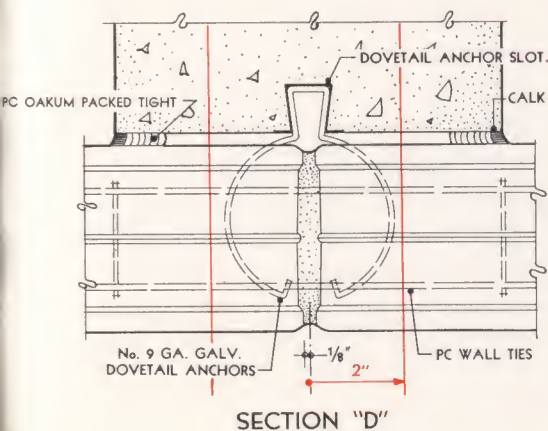
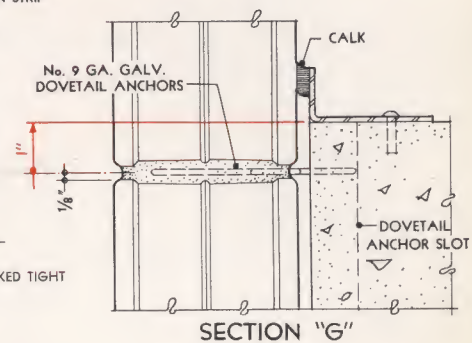
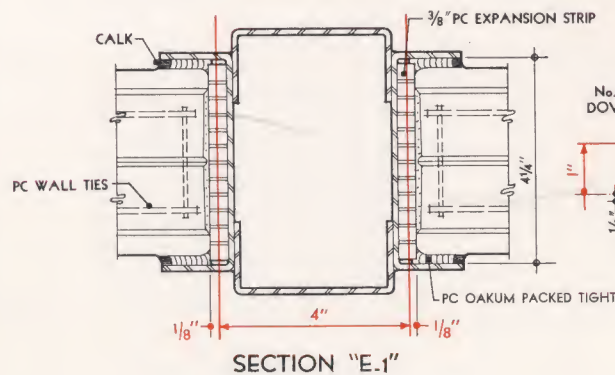
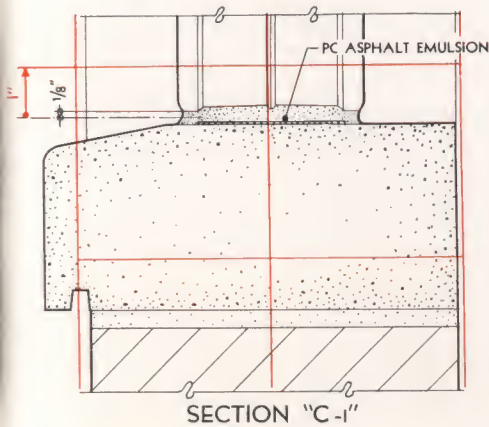
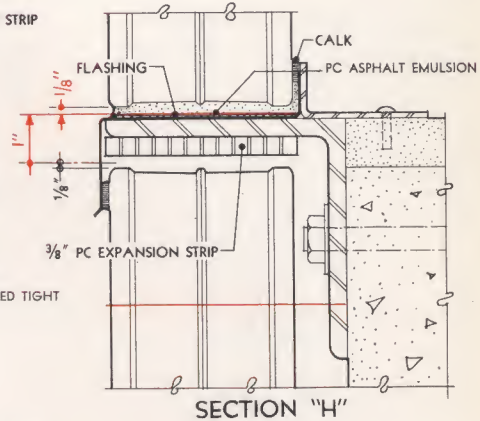
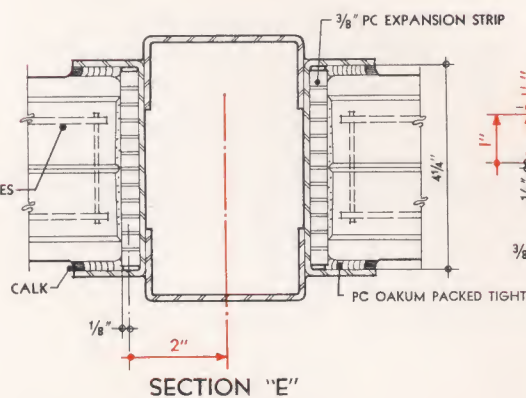
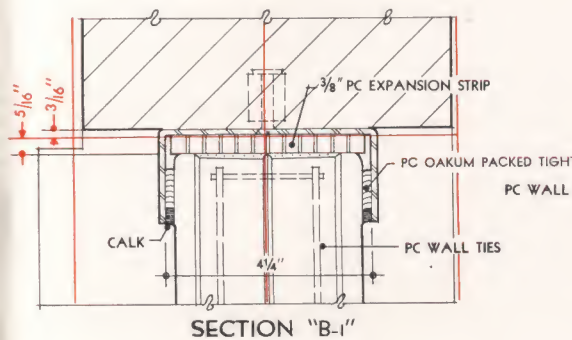
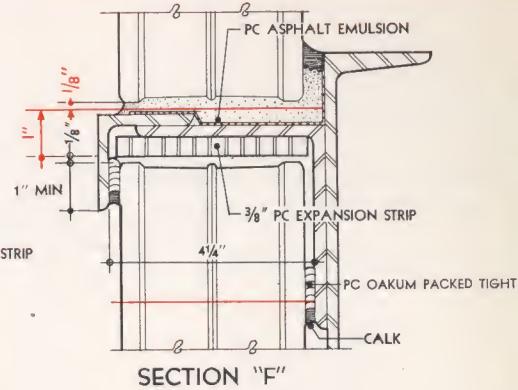
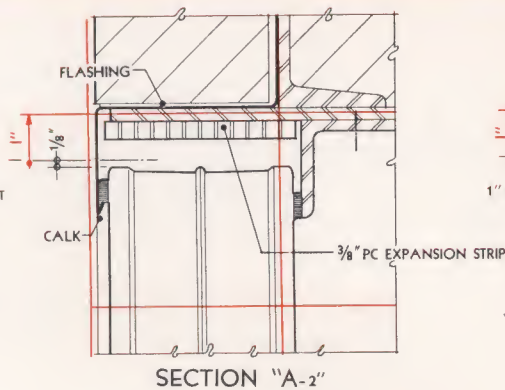
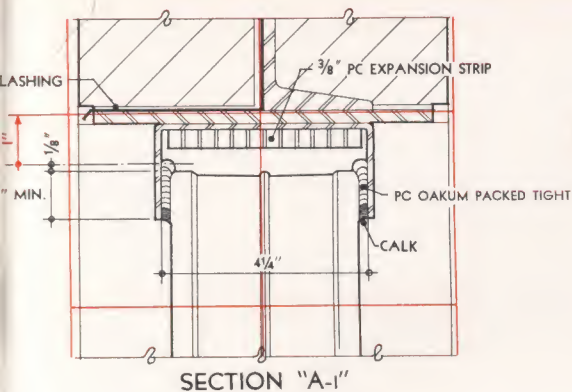


SECTION "B"



SECTION "C"

INSTALLATION DETAILS

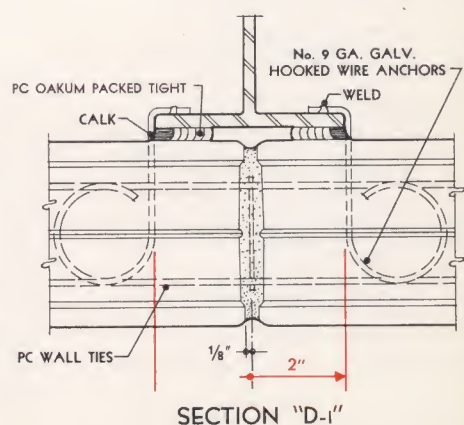


GENERAL NOTES

All red lines shown are Grid Lines.

When Section "B-1" is used, vertical mortar joints of panel must be compressed slightly to obtain sufficient space at jambs for expansion strips.

GRID POSITION: Installation details for glass block panels establish the grid position of individual units vertically and horizontally. The vertical joints may be either on grid lines or centered between grid lines, depending upon the details used at the panel jambs. The centerlines of horizontal joints may either be on grid lines or some small dimension, normally 1", below or above grid lines. Glass block panels are normally positioned with the nominal faces on grid lines, so as to fit with chases or recesses in masonry openings. Other grid positions for the exposed faces may be used where required, examples of which are shown. Those details which do not indicate panel position with reference to grid lines, can be used for several conditions.

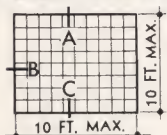


...for small exterior panels

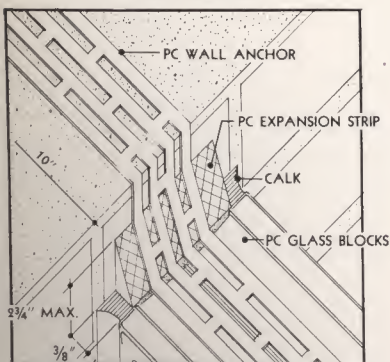
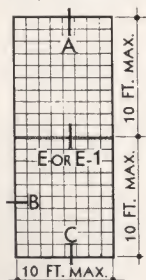
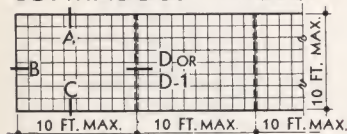
Wall anchors providing lateral support for glass block panels are restricted only by building code requirements and the discretion of the architect. Where wall anchors are forbidden, chase construction shall be used.

SMALL EXTERIOR PANELS 100 SQ. FT. MAX. AREA

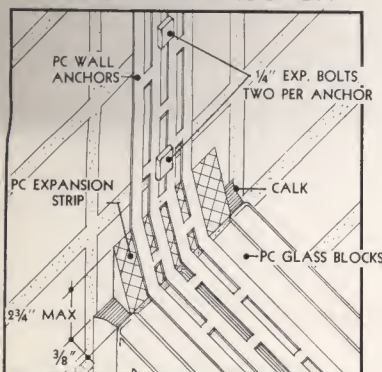
SIMPLE PANELS



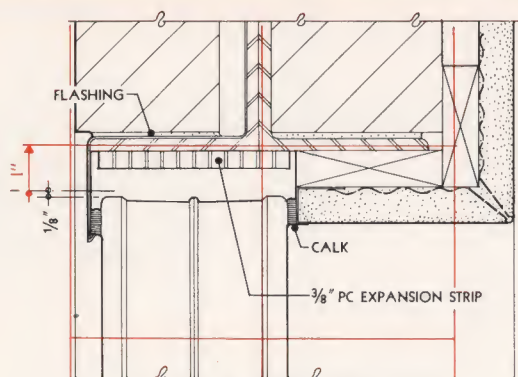
CONTINUOUS PANELS



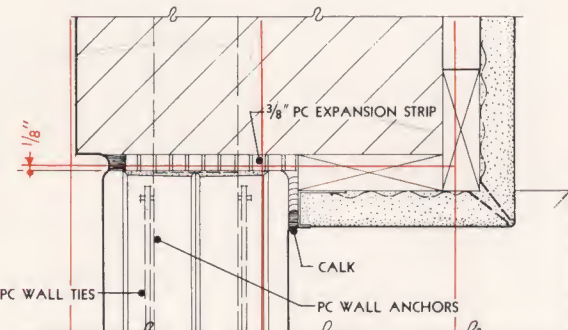
PC WALL ANCHORS
IN NEW CONSTRUCTION



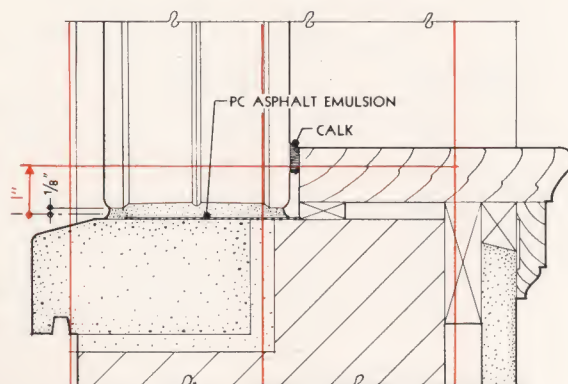
PC WALL ANCHORS IN
EXISTING CONSTRUCTION



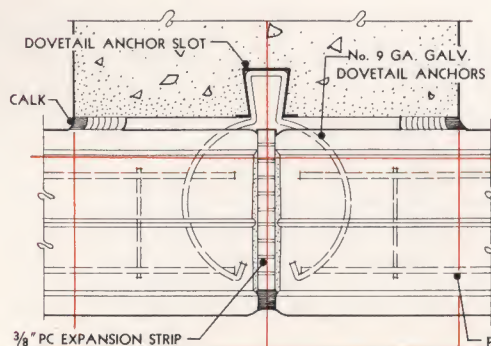
SECTION "A"



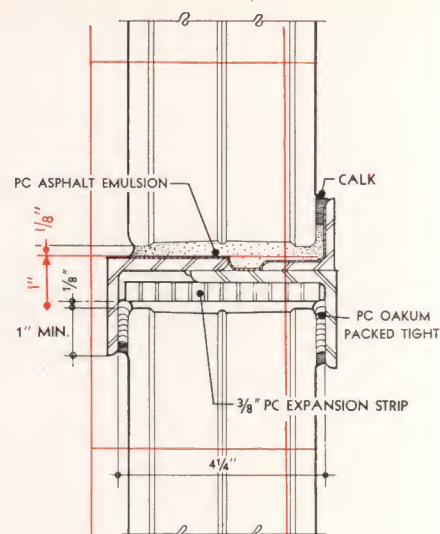
SECTION "B"



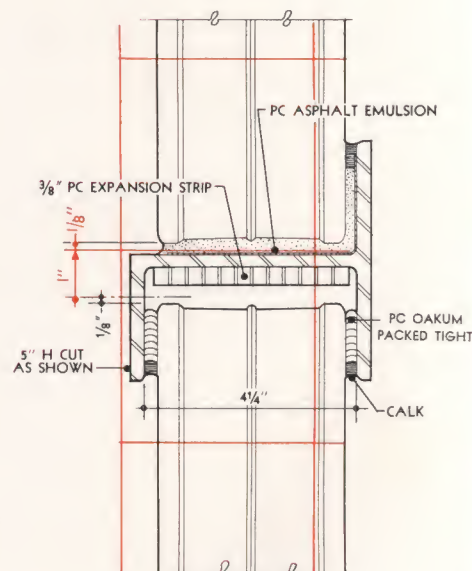
SECTION "C"



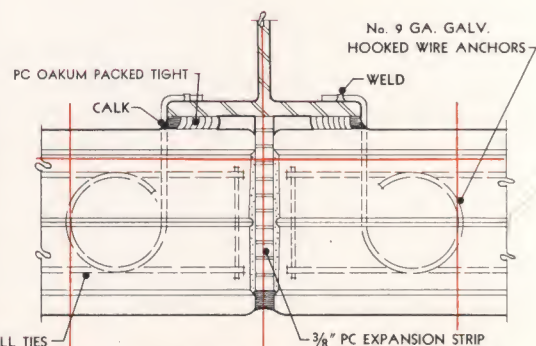
SECTION "D"



SECTION "E"



SECTION "E-1"

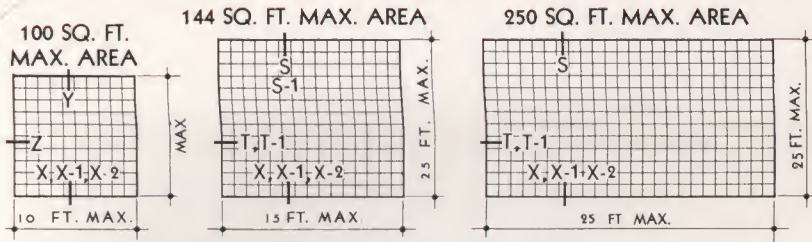


SECTION "D-1"

Where Sections "D" and "D-1" are used, vertical mortar joints of panels must be compressed slightly to obtain space for expansion strips.

MODULAR INSTALLATION DETAILS

...for interior panels

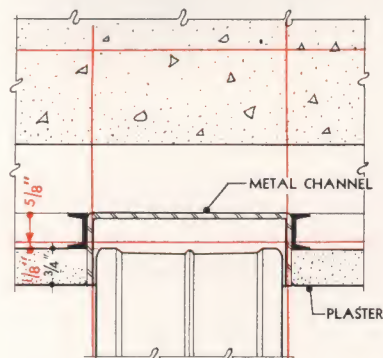


INTERIOR PANEL SIZE LIMITATIONS WITH
MINIMUM EXPANSION & ANCHORAGE REQUIREMENTS

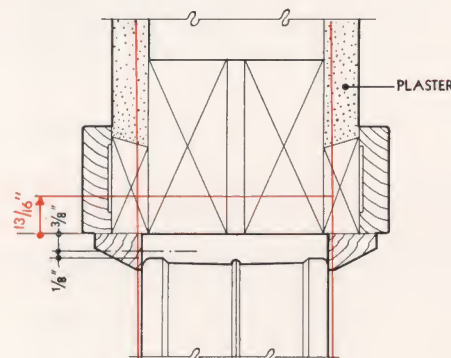
Construction supporting panels over 144 square feet in area must be of a type which will provide for a minimum of movement and settlement.

Information shown on this sheet is not intended to conflict with any local building code requirements.

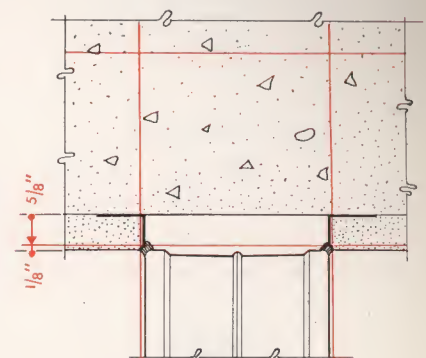
Before glass blocks are installed in wood partitions, all wood adjacent to mortar shall be properly primed.



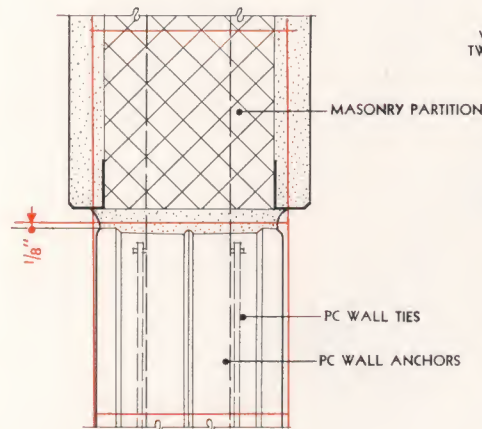
SECTION "S"



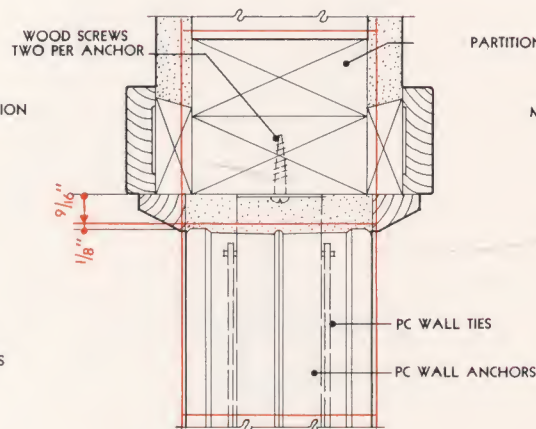
SECTION "S-1"



SECTION "Y"

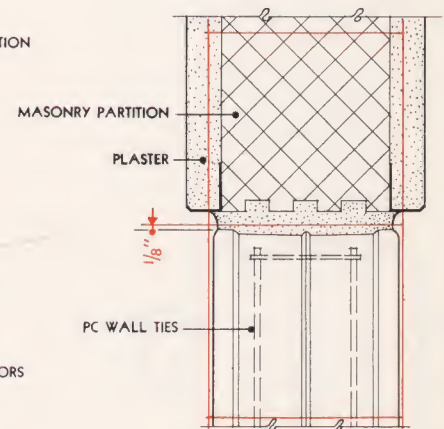


SECTION "T"

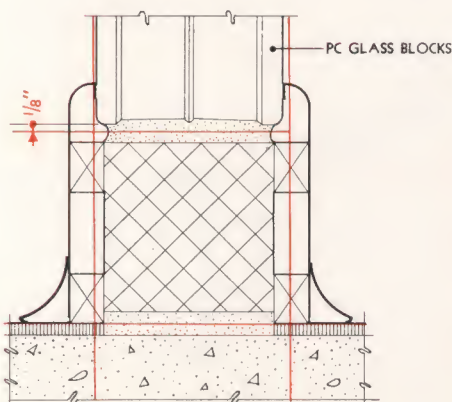


SECTION "T-1"

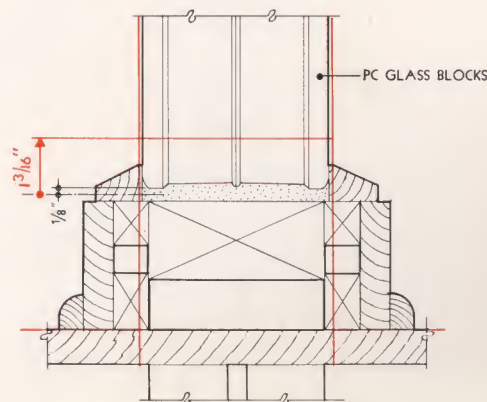
PARTITION



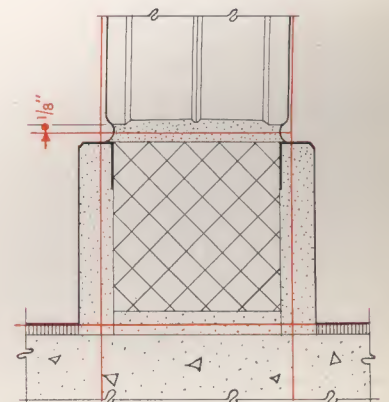
SECTION "Z"



SECTION "X"



SECTION "X-1"

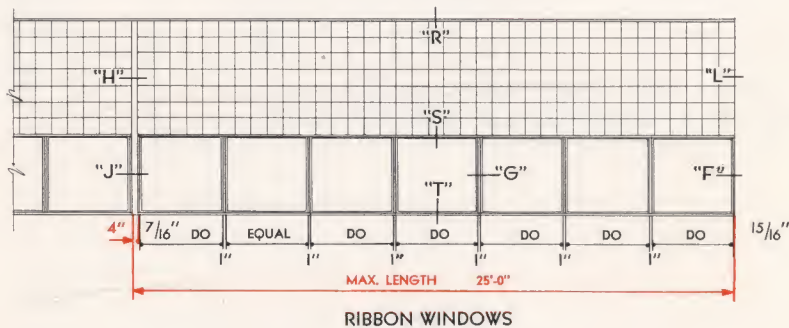
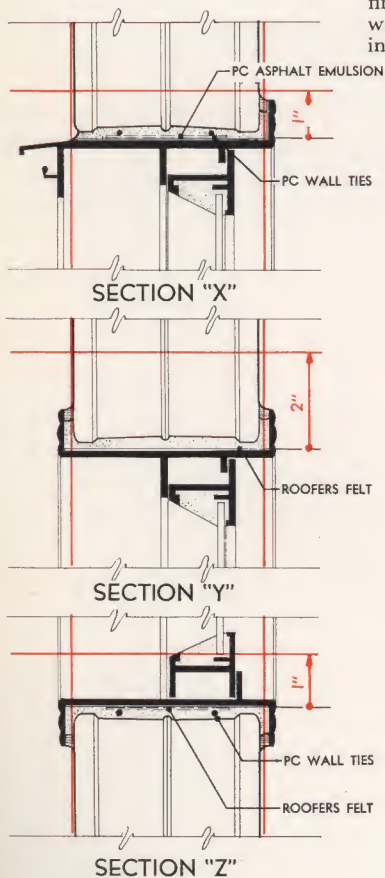


SECTION "X-2"

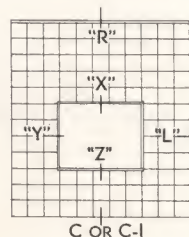
... for sash and glass block combinations used in PC Vision-Lighting Plans

The details shown are presented to indicate the use of ventilators, ribbon windows and other types of sash in combination with PC Glass Block panels. Most window manufacturers can furnish sash of types and finish to suit individual requirements. The ribbon window details show the Heavy type, which can be installed in lengths up to 25'-0", with maximum sash

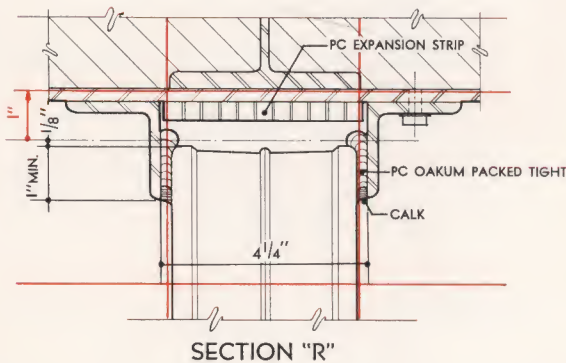
size 48" x 48". Lighter (Standard) ribbon windows are available in lengths up to 12'-0", with maximum sash size 36" x 36". All ribbon windows are factory assembled, with continuous head and sill members up to the maximum lengths noted above. Many ventilation arrangements are available. Consult manufacturers for full details.



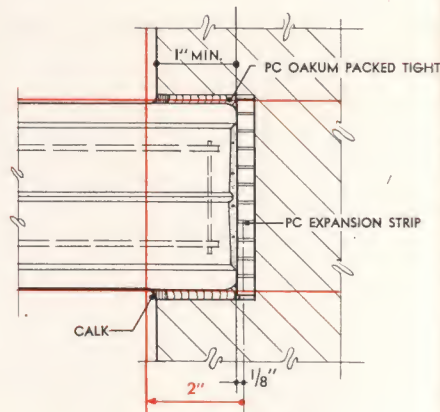
REBOW WINDOWS



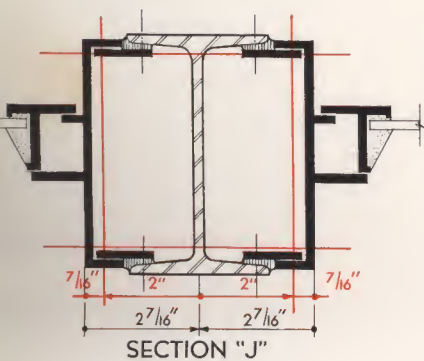
VENTILATORS



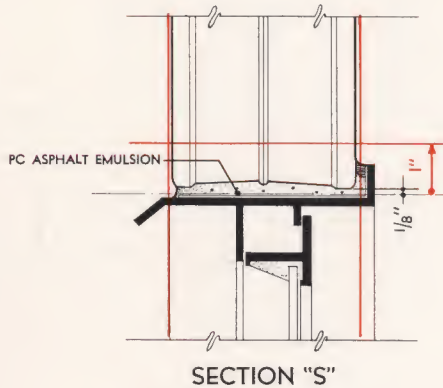
SECTION "R"



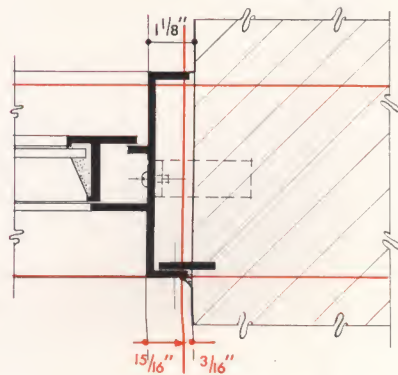
SECTION "L"



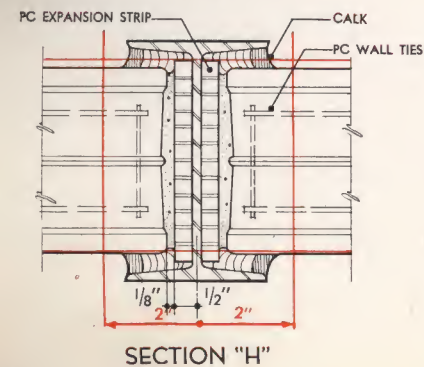
SECTION "J"



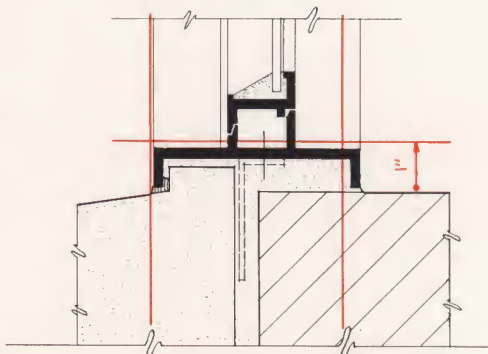
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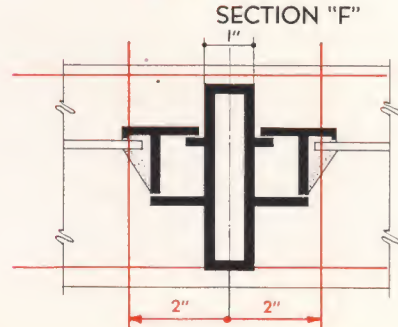
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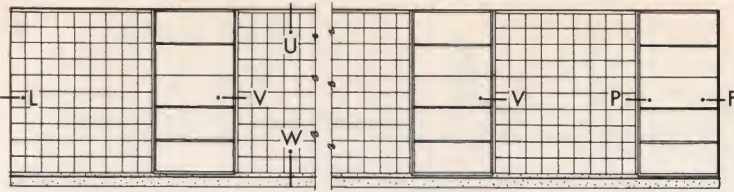
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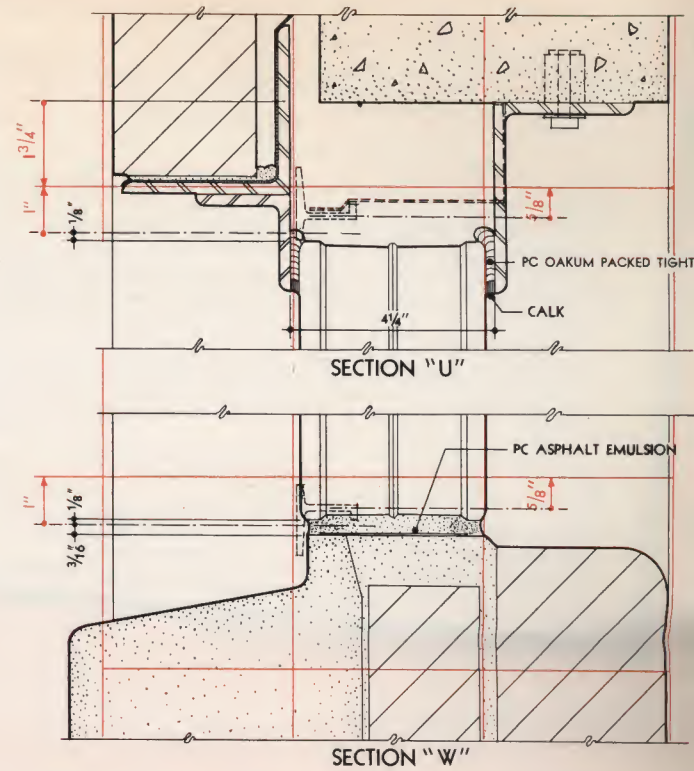
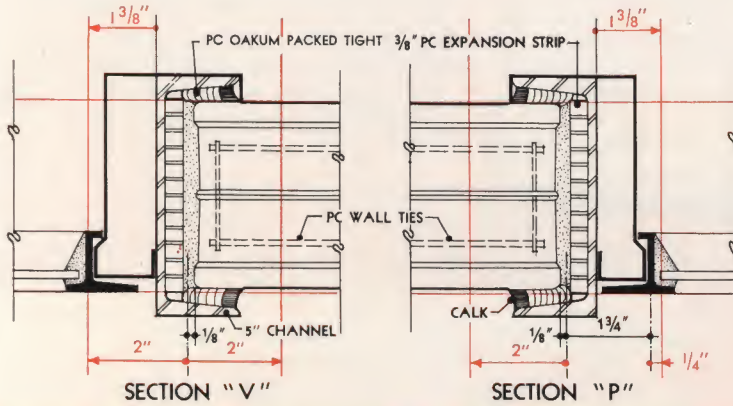
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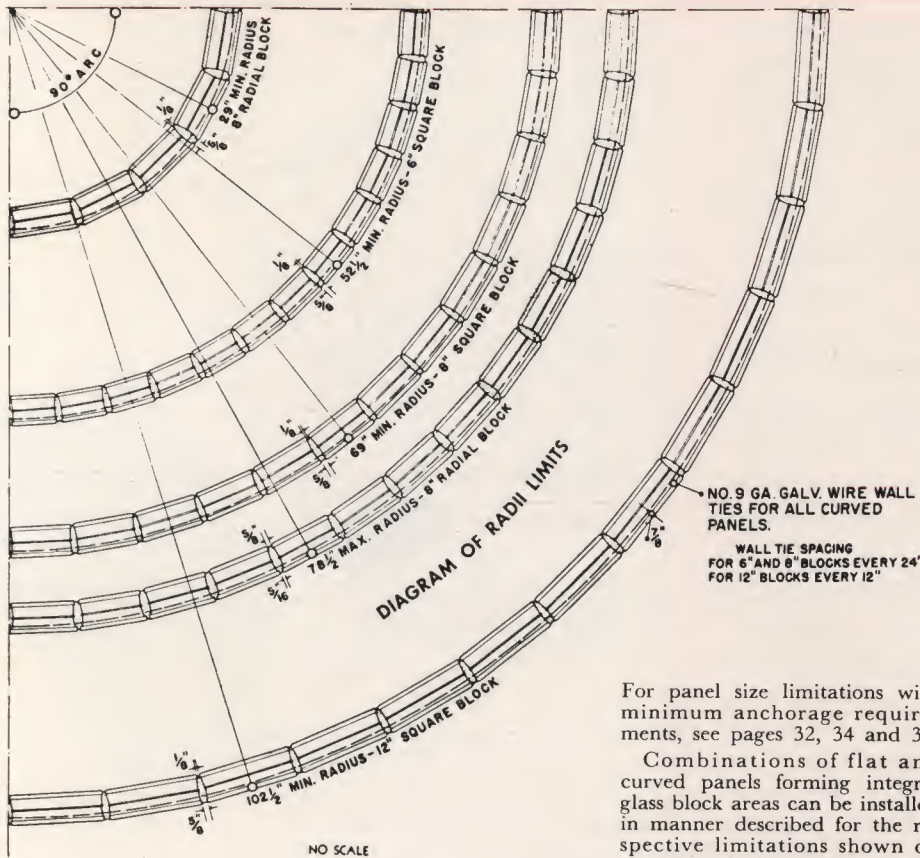
SECTION "G"



NOTE: FOR SECTIONS "L" AND "F" SEE PAGE 36



Curved panel installation requirements with table of radii limits



For panel size limitations with minimum anchorage requirements, see pages 32, 34 and 35.

Combinations of flat and curved panels forming integral glass block areas can be installed in manner described for the respective limitations shown on pages noted above. However, it is suggested that the curved areas be separated from the flat areas by means of intermediate expansion joints and supports as indicated on the small diagrams at the left.

For intermediate expansion joints and supports, see Details.

TABLE OF RADII LIMITS FOR CURVED PANELS

Outside Radius Inches	Number of Block in 90° Circular Arc	Joint Thickness in inches		Remarks
		Inside	Outside	
6" SQUARE BLOCK				
52-1/2	13	1/8	5/8	Minimum
56-1/4	14	1/8	9/16	
56-3/4	14	3/16	5/8	
60	15	1/8	9/16	
61	15	3/16	5/8	
63-3/4	16	1/8	1/2	
65	16	1/4	5/8	
67-1/2	17	1/8	1/2	
69	17	1/4	5/8	
71-1/4	18	1/8	7/16	
73	18	5/16	5/8	

No Maximum Limitations.

8" SQUARE BLOCK				
69	13	1/8	5/8	Minimum
74	14	1/8	9/16	
74-3/4	14	3/16	5/8	
79	15	1/8	1/2	
80	15	1/4	5/8	
84	16	1/8	1/2	
85-1/4	16	1/4	5/8	

No Maximum Limitations.

8" RADIAL BLOCK				
29	5	1/8	5/8	Minimum
34	6	1/8	3/8	
34-3/4	6	3/8	5/8	
39	7	1/8	1/4	
40-3/4	7	1/2	5/8	
44	8	1/8	1/8	
46-1/2	8	5/8	5/8	
49-1/2	9	3/16	1/8	
51-3/4	9	5/8	9/16	
55	10	1/4	1/8	
57-1/4	10	5/8	1/2	
60-1/2	11	5/16	1/8	
62-1/2	11	5/8	7/16	
66	12	3/8	1/8	
67-3/4	12	5/8	3/8	
71-1/2	13	3/8	1/8	
73-1/4	13	5/8	5/16	
76-3/4	14	7/16	1/8 Use Square	
78-1/2	14	5/8	5/16 Block for larger radii	

12" SQUARE BLOCK				
102-1/2	13	1/8	5/8	Minimum

NOTE: Radii given to closest quarter inch; joint thicknesses to closest sixteenth inch.

Oct. 31, 1951

Guide No. 120 IW7

Pittsburgh Corning Corp. Pittsburgh, Pa.

Glass Blocks

For window openings not exceeding 120 sq. ft. in area, nor 12 ft. in width or height, subject to light fire exposure (Class F openings).

Pattern designations Argus, Argus LX, Argus Parallel Flutes, Argus Parallel Flutes LX, Decora, Vue, Bristol 55, Bristol 55LX, Essex B55, Prism A55 and Prism B55 hollow glass blocks nominally 7 3/4 by 7 3/4 in. face dimensions, 3 3/4 in. thick; and patterns, Argus, Argus Parallel Flutes and Decora, 5 3/4 by 5 3/4 in. face dimensions, 3 3/4 in. thick; laid with 1/4 in. horizontal and vertical mortar joints, mortar consisting of one part portland cement, one part hydrated lime, and four parts No. 1 screened torpedo sand by volume.

Steel lintels made of 3 by 3 in. steel angles, cut to provide 1 1/4 in. clearance at each jamb, secured to the structural steel of the building with 3/8 in. bolts; provided with heavy galvanized washers in 2 in. slotted holes, spaced 12 in. on center. Blocks extending 1 1/4 in. into the groove with glass or mineral wool for expansion in the remaining spaces formed by the angles and each horizontal row of blocks reinforced with Nos. 8 to 10 and 12 to 16 Awg galvanized wire mesh for the full length.

Concrete masonry lintels provided with 2 1/2 in. deep grooves, with the blocks extending 1 1/2 in. into the groove with glass or mineral wool in the remaining space and each horizontal row of blocks reinforced for full length with Nos. 8 to 10 and 12 to 16 Awg galvanized wire mesh, except between the two top rows. The jambs of brick or concrete provided with 2 1/2 in. deep groove with the blocks extending 1 1/2 in. into the groove with glass or mineral wool in the remaining spaces in the grooves, to provide expansion of the glass panels.

Sills made of concrete, coated with an asphalt emulsion to provide for expansion and movement of the panel. Exterior jamb and lintel edges caulked with waterproofing mastic.

Marking: Letters "P-C", pattern designation, size and listee's name on each container.

Listed—Reexamination Service. See description of Reexamination Service on guide card.

Authorities having jurisdiction should be consulted before installation.

This card replaces Retardant 2556, dated Feb. 6, 1950.

This card is issued by UNDERWRITERS' LABORATORIES, INC.

PC GLASS BLOCKS

Listed by

Underwriters' Laboratories, Inc.

NOTE: For information regarding details of chase construction required, consult the Pittsburgh Corning Corporation, 307 Fourth Avenue, Pittsburgh 22, Pa., or your nearest branch of the Pittsburgh Plate Glass Company, W. P. Fuller & Company on the Pacific Coast, or Hobbs Glass, Limited, in Canada.

PC GLASS BLOCKS APPROVED
BY BUILDING CODE AUTHORITIES

Building Code Authorities throughout the country have accepted and approved the use of PC Glass Blocks as a building material of adequate strength for non-load-bearing construction when installed according to the manufacturer's directions.

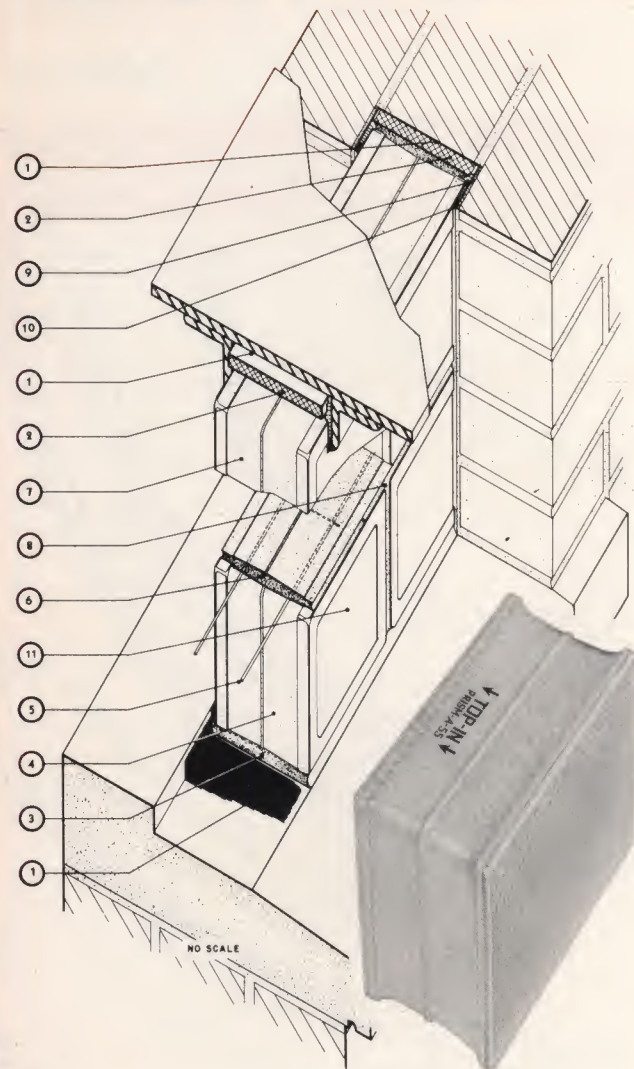
How to Install PC Glass Blocks

1. Mop entire perimeter of opening with heavy coat of asphalt emulsion.
2. Adhere PC Expansion Strip to jambs and head. Make certain expansion strip extends to sill.
3. Place full mortar bed at sill—do not furrow.
4. Set lower course of block. All vertical and horizontal mortar joints must be full and not furrowed. Steel tools must not be used to tap blocks into final position.
5. Install PC Wall Ties in horizontal joints where required as follows:
 - (a) Place lower half of mortar bed. Do not furrow.
 - (b) Place wall tie centered in joint.
 - (c) Cover wall tie with upper half of mortar bed and trowel smooth. Do not furrow.
 - (d) Wall ties must run from end to end of panels and where used continuously must lap 6 inches. Wall ties must not bridge expansion joints.
6. Place full mortar bed for joints not requiring wall ties—do not furrow.
7. Follow instructions 3, 4 and 6 for setting succeeding courses of blocks.
8. Strike joints smoothly while mortar is still plastic and before final set. At this time rake out all spaces requiring calking to a depth equal to the width of the spaces. Remove surplus mortar from faces of glass blocks and wipe dry.
9. After final mortar set, pack PC Oakum (as specified) tightly into jamb and head construction.
0. Calk panels as indicated on details.
1. Final cleaning of glass block faces shall not be done until after final mortar set.

ESTIMATING DATA

(For 100 sq. ft. of panel laid with 1/4-in. visible mortar joints)

Size of block	6"	8"	12"
Number of blocks	400	225	100
Weight of panel	2000 lbs.	1800 lbs.	1900 lbs.
Volume of mortar	4.3 cu. ft.	3.2 cu. ft.	2.2 cu. ft.



PC Functional Glass Blocks can be set in one position only. As an aid to the mason, each block—as shown above—has a marking stamped on the top mortar edge of the inside half. For additional identification, certain patterns have a series of small ribs pressed in the glass next to this marking. When the block is laid correctly the exterior flutes will be vertical.

CLOSED SPECIFICATIONS

GENERAL CONDITIONS: The "General Conditions" of the contract are a part of these specifications.

SCOPE OF THE WORK: This contractor shall furnish all labor and materials to install all glass blocks where shown on the drawings or specified hereunder. This shall include the furnishing and installation of all expansion joint strips, oakum packing, felts, wall ties, wall anchors, calking, asphalt emulsion, and other labor and materials necessary for a complete installation. This contract does not include the preparation of the structure to receive the glass block panels, such as chases, stiffeners, etc., except as hereinafter specified.

MATERIALS: Glass Blocks . . . shall be partially evacuated hollow masonry units made of clear, colorless glass, as manufactured by the Pittsburgh Corning Corporation. These units shall be made by fusing two sections of pressed glass together at elevated temperatures. Edge construction of the units shall be such that a "key-lock" mortar joint is formed. Each unit shall be edge-coated with a resilient plastic to improve bond with mortar.

Patterns—Sizes—Shapes . . . shall be as shown on the drawings or as specified hereunder:
(Indicate PC patterns, sizes and shapes, and locations)

Expansion Joint Materials . . . where shown or required, shall be PC Expansion Strips as furnished by the Pittsburgh Corning Corporation.

Asphalt Emulsion . . . where shown or required, shall be PC Asphalt Emulsion as furnished by the Pittsburgh Corning Corporation.

Wall Ties . . . shall be PC Wall Ties of galvanized steel double wire mesh formed of two parallel wires (No. 9 gage) 2 in. on centers with electrically welded cross wires (No. 14 gage) at regular intervals. These ties shall be embedded in horizontal mortar joints on approximately 24 in. centers, and in joints immediately above and below all openings within panels. Ties shall run continuously from end to end of panels and shall be lapped not less than 6 in. wherever it is necessary to use more than one length. Do not bridge expansion joints with these ties.

Wall Anchors . . . where shown on drawings shall be PC Wall Anchors as furnished by the Pittsburgh Corning Corporation and shall be No. 20 gage perforated steel strips 24 in. long by 1 3/4 in. wide galvanized after perforating. All wall anchors must be bent within expansion joints, and shall generally be placed 24 in. apart occurring in the same joint as wall ties and must be completely embedded in the mortar joint of the glass block panels.

Mortar . . . shall be 1 part Portland cement, 1/4 to 1 1/4 parts lime, and sand equal to between 2 1/4 and 3 times the amount of cementitious material (cement plus lime), all measured by volume, plus an integral type waterproofer. If a waterproof Portland cement is used, the integral type waterproofer shall be omitted. For interior panels the waterproofer may be omitted. Admixtures in the form of setting accelerators and anti-freeze compounds shall not be used.

Any combinations of the above mortar mixes will fall within types A-1, A-2 or B mortar as recommended by the "American Standard Building Code Requirements for Masonry," and approved by the American Standards Association as American Standard A41.1 (as revised).

Mixing: The mortar shall be mixed to a consistency as stiff as will permit good working and shall be drier than mortar for ordinary clay brickwork. Retempering the mortar after it has taken its initial set shall not be permitted.

FLASHINGS: Unless otherwise specified, contractor shall furnish and install in locations shown or where required, flashings as are necessary to provide a complete installation.

INSTALLATION: Areas at the sill to be covered by mortar shall be given a heavy brush coat of asphalt emulsion which shall be allowed to dry before blocks are laid. Where required, expansion strips shall be adhered to head and jambs by the use of asphalt emulsion and shall run continuously from end to end of expansion space.

All mortar joints must be completely filled with mortar and shall not be furrowed. Mortar must not bridge across expansion joints. Blocks shall be laid up straight, plumb and true to dimensions, with 1/4 in., or as otherwise specified, visible width mortar joints. Joints shall be tooled smooth and slightly concave just before mortar attains initial set so that the exposed edges of the blocks are sharp, clean lines. The number of courses of blocks laid in successive lifts shall be limited to prevent squeezing out of the mortar and movement of the blocks.

CLEANING: Surplus mortar shall be removed and the faces of the blocks wiped dry at the time joints are tooled. Cleaning is facilitated by the use of a fine, soft wire brush, or in the case of blocks having the PC Clean-Easy Face Finish, by an ordinary household scrub brush having stiff, brown bristles. Final cleaning shall be done by others after mortar has attained final set.

PROPORTIONS BY VOLUME

Mortar Type	Portland Cement	Hydrated Lime or Lime Putty Allowable Range	Aggregate	Minimum Compressive Strength of 2" Cube at 28 days (P.S.I.)
A-1	1	1/4 *	Between 2 1/4 and 3 times the volume of cementitious materials (cement plus lime)	2500
A-2	1	More than 1/4 but less than 1/2	"	1800
B	1	1/2 to 1 1/4	"	750

*Maximum and minimum

NOTE: At the discretion of the architect or engineer, a mortar prepared from masonry cement of low volume change, incorporating a metallic stearate type waterproofer, and mixed in accordance with the manufacturer's recommendations may be specified as an alternate.

Portland Cement . . . shall be Type 1 conforming to the Standard Specifications for Portland Cement, A.S.T.M. Designation C 150-49.

Lime . . . shall be a high-calcium lime, or a pressure hydrated dolomitic lime provided that not less than 92% of all the active ingredients are completely hydrated.

Sand . . . shall conform with the Standard Specifications for Aggregate for Masonry Mortar, A.S.T.M. Designation C 144-44, for thin joints.

Waterproofer . . . shall be Pittsburgh Plate Glass Company Type NV-3389 (metallic stearate type). It shall be added to the mortar at the time of mixing and in the proportion recommended by the manufacturer, except where a waterproof Portland cement or prepared waterproofed masonry cement mortar is used. In the latter cases, no waterproofer shall be added at the time of mixing.

Oakum . . . where indicated on drawings or required as a lateral cushioning for glass block panels at side jambs, heads and intermediate supports, shall be PC Oakum (non-staining, dry-rot treated, sliver type) as furnished by the Pittsburgh Corning Corporation.

Calking . . . shall be as specified by the architect and shall be a non-staining, waterproof mastic. This shall be evenly applied to the full depth of recesses as indicated on the details.



glass blocks

Manufactured by **PITTSBURGH CORNING CORPORATION** • 307 Fourth Avenue, Pittsburgh 22, Pa.

